

PRELIMINARY REPORT OF 051229

last update on Thu Dec 29 16:41:05 GMT 2005

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1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P), global monitoring products (ASA_GM1_1P), which are the available few hours after the acquisition, on the browse (BP) products and on the Module Stepping (MS) product.

2 - Summary

2.1 - Instrument Unavailability

No unavailabilities during the reported period.

2.2 - Auxiliary files

Summary of the auxiliary files used from 2005-12-28 00:00:00 to 2005-12-29 16:41:05

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	20	0	14	0	25
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	20	0	14	0	25
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	20	0	14	0	25
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	20	0	14	0	25

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	38	51	33	7	60
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	38	51	33	7	60
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	38	51	33	7	60
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	38	51	33	7	60

2.3 - Browse Visual Inspection

2.4 - Data Analysis

- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

3 - Module Stepping Mode

No anomalies observed on available MS products:

Polarisation	Start Time
V	20051229 100802
H	20051226 050030

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

MSM in H/H polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
☒
☒

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
☒
☒

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS
☒

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.681216	0.263296	-0.926327
7	P1	-2.728545	0.133143	-0.638561
11	P1	-4.142450	0.034901	0.064825
15	P1	-5.003936	1.801106	-2.549352
19	P1	-3.027510	0.069570	-0.494497
22	P1	-4.431529	0.023670	-0.145738
26	P1	-4.411579	0.063735	0.437746
30	P1	-5.645316	0.036392	-0.297739
3	P1	-15.670679	2.915159	-3.197497
7	P1	-15.202537	2.818736	-3.172213
11	P1	-16.288074	0.476695	-0.722241
15	P1	-12.653154	0.936411	-1.526532
19	P1	-13.396809	0.385705	-1.134389
22	P1	-15.916335	0.643833	-0.257385
26	P1	-15.015203	1.100153	-1.771682
30	P1	-15.458838	2.563662	-2.836925

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.811539	0.115461	0.308184
7	P2	-22.542677	0.106765	0.039565
11	P2	-16.519020	0.134234	0.409299
15	P2	-7.278145	0.105632	0.075542
19	P2	-9.213656	0.103993	0.011945
22	P2	-17.874109	0.113270	-0.189625
26	P2	-16.389997	0.132328	0.333357
30	P2	-19.800024	0.120759	0.286262

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.235455	0.007644	0.015260
7	P3	-8.235455	0.007644	0.015260
11	P3	-8.235455	0.007644	0.015260
15	P3	-8.235455	0.007644	0.015260
19	P3	-8.235455	0.007644	0.015260
22	P3	-8.235455	0.007644	0.015260
26	P3	-8.235455	0.007644	0.015260
30	P3	-8.235455	0.007644	0.015260

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.709525	0.008419	-0.021319
7	P1	-2.773136	0.007677	0.027371
11	P1	-2.879532	0.009324	0.014916
15	P1	-3.421638	0.016691	-0.021481
19	P1	-3.393570	0.014385	-0.002635
22	P1	-5.127014	0.018557	0.005933
26	P1	-5.851954	0.016470	-0.015427
30	P1	-5.281400	0.033293	0.011339
3	P1	-11.487376	0.041476	-0.025995
7	P1	-9.968035	0.047262	0.019661
11	P1	-10.054277	0.057466	-0.005636
15	P1	-10.565387	0.071759	-0.018960
19	P1	-15.520483	0.074449	0.007425
22	P1	-20.947828	0.950863	0.156388
26	P1	-17.144146	0.290237	0.166084
30	P1	-18.222006	0.295518	0.284990

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.597595	0.029205	0.112125
7	P2	-23.046375	0.055392	0.072764
11	P2	-11.587087	0.019980	0.170477
15	P2	-4.992245	0.021164	0.020875
19	P2	-6.975047	0.021085	-0.001112
22	P2	-8.212184	0.022681	-0.012507
26	P2	-24.051964	0.030038	0.028743
30	P2	-22.134949	0.017187	-0.014225

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.078186	0.002429	0.001225
7	P3	-8.078349	0.002427	0.000920
11	P3	-8.078371	0.002415	0.000586
15	P3	-8.078321	0.002413	0.001290
19	P3	-8.078411	0.002429	0.001098
22	P3	-8.078299	0.002423	0.001608
26	P3	-8.078308	0.002397	0.001490
30	P3	-8.078166	0.002425	0.001133

4.3 - cal pulses monitoring (all rows)

4.3.1 - Evolution for WVS



4.3.2 - Evolution for GM1



5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000453551
	stdev	2.20958e-07
MEAN Q	mean	0.000465889
	stdev	2.36818e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128785
	stdev	0.00112491
STDEV Q	mean	0.129069
	stdev	0.00113741



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005122[789]

The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20051227_003806_00000502043_00403_19996_4808.N1	1	0
ASA_IMM_1PNPDE20051228_002245_000003782043_00417_20010_4893.N1	1	0
ASA_IMM_1PNPDE20051229_003425_000001302043_00431_20024_5024.N1	1	0
ASA_IMM_1PNPDE20051229_011742_000000362043_00432_20025_5054.N1	1	0
ASA_IMM_1PNPDK20051228_130204_000000822043_00425_20018_9725.N1	1	0
ASA_WSM_1PNPDE20051227_164743_000001832043_00413_20006_5861.N1	0	8
ASA_WSM_1PNPDE20051228_184007_000000672043_00428_20021_6052.N1	0	33
ASA_WSM_1PNPDE20051229_012419_000003422043_00432_20025_6107.N1	0	13



7 - Doppler Analysis

Preliminary report. The data is not yet controlled

7.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)

<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input type="checkbox"/>

7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

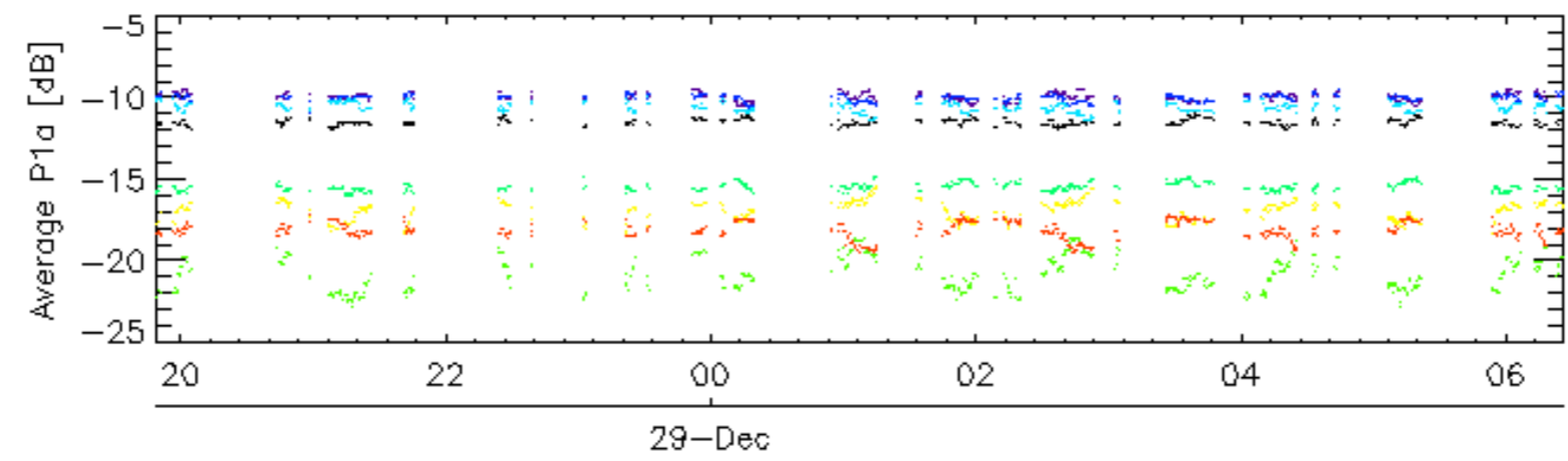
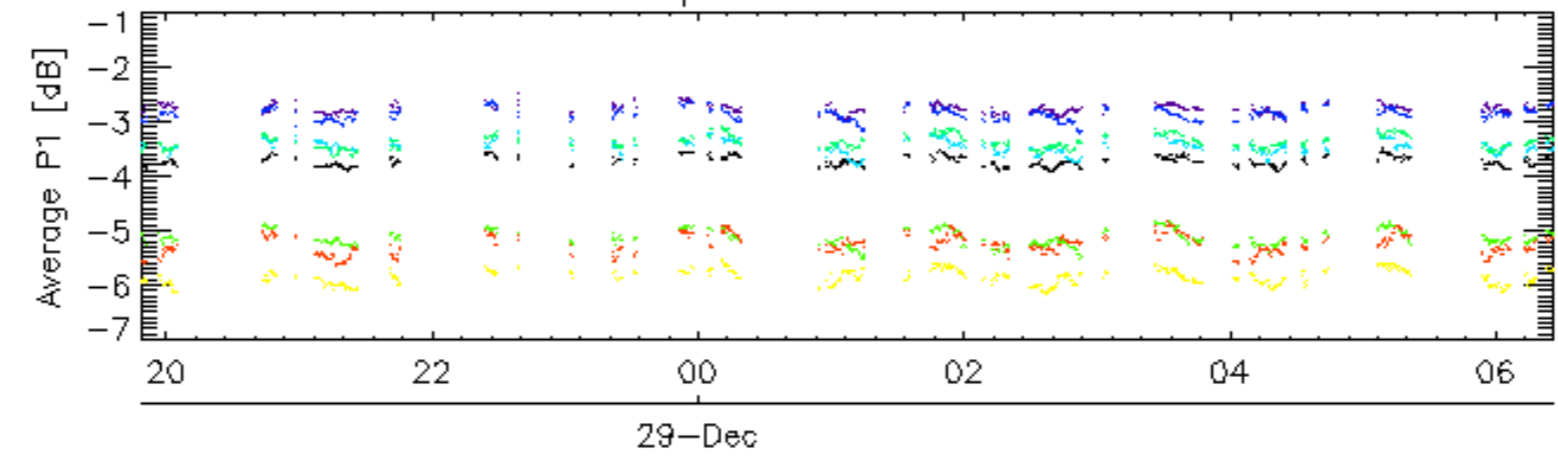
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

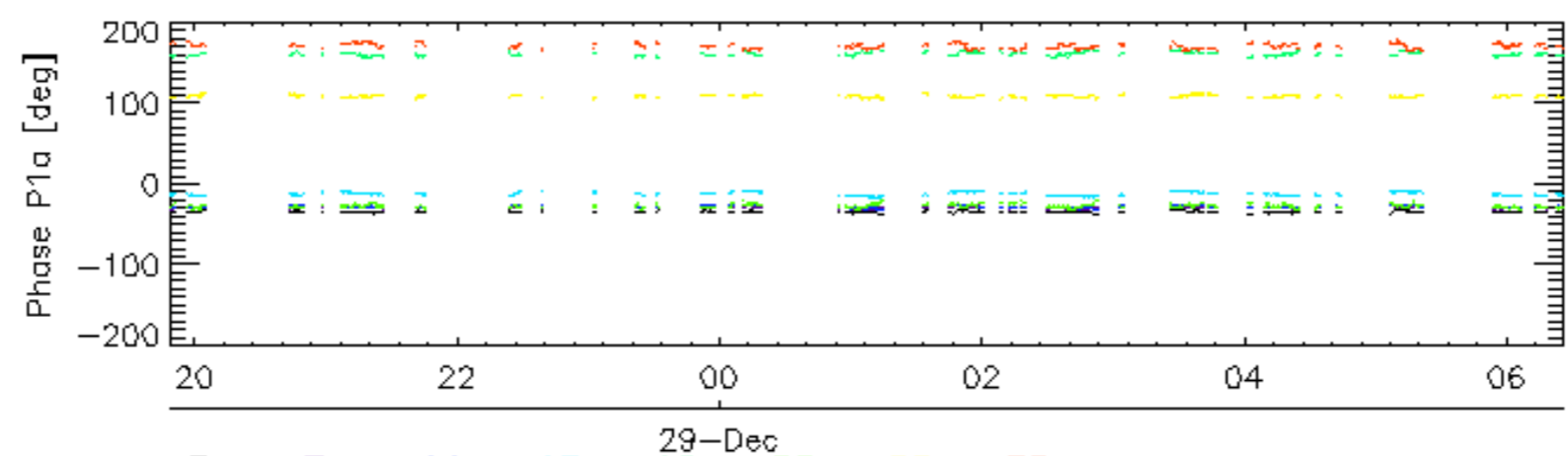
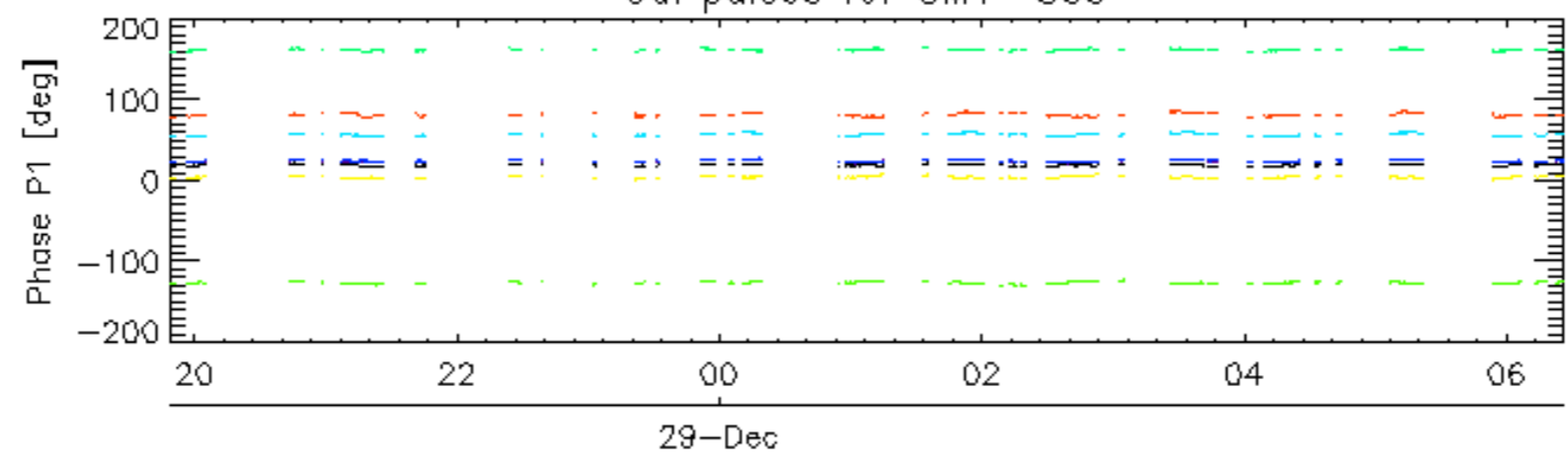
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

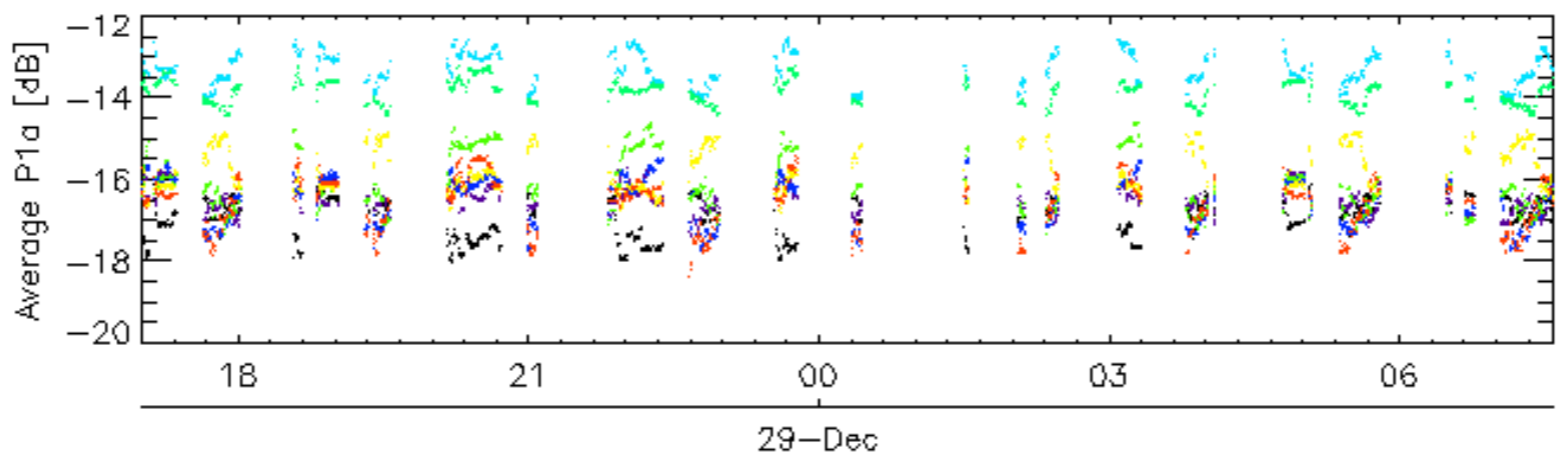
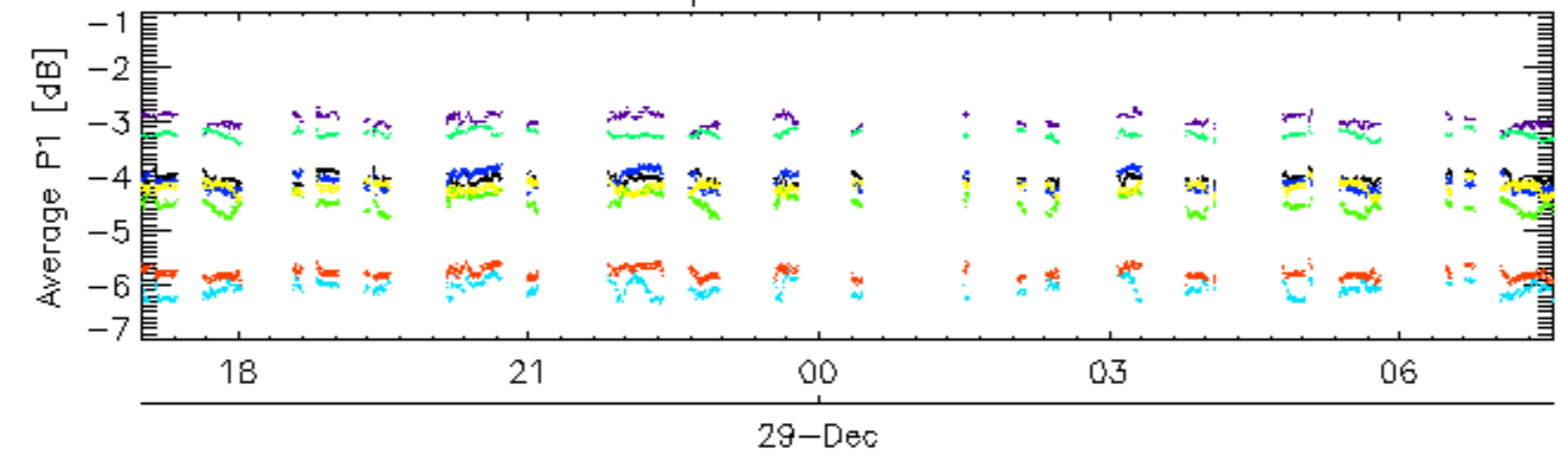


Cal pulses for GM1 SS3

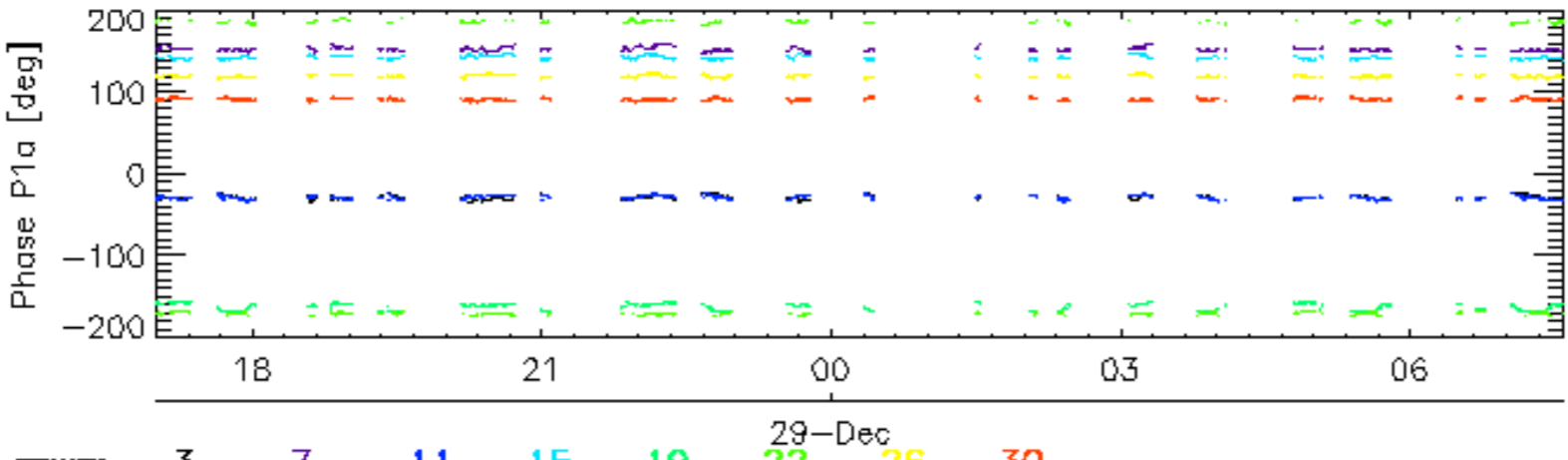
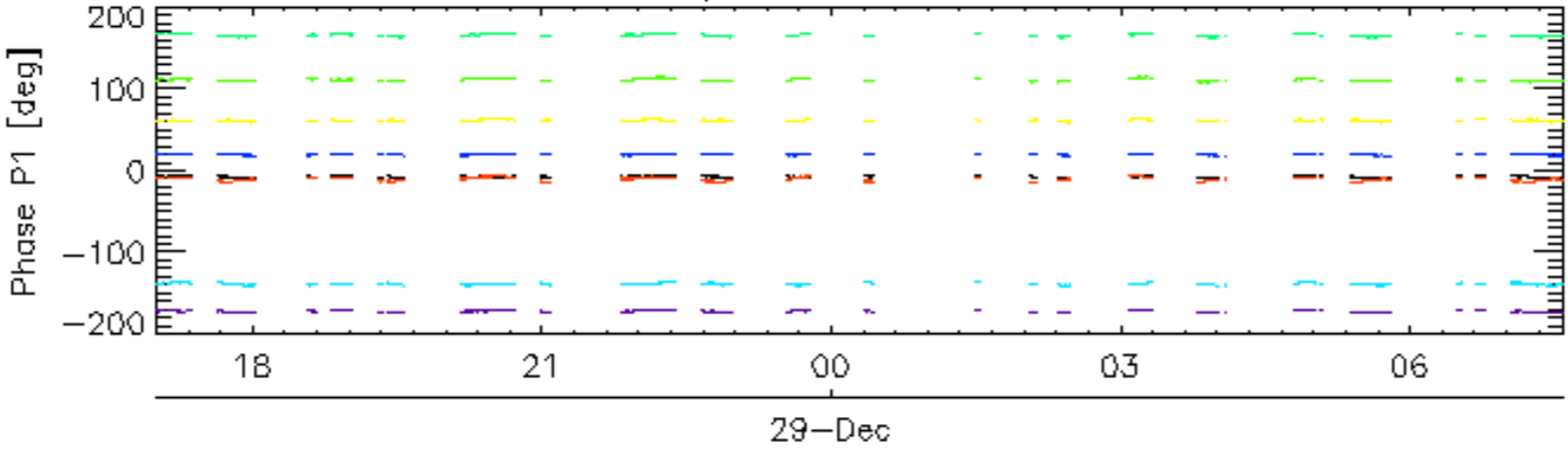


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

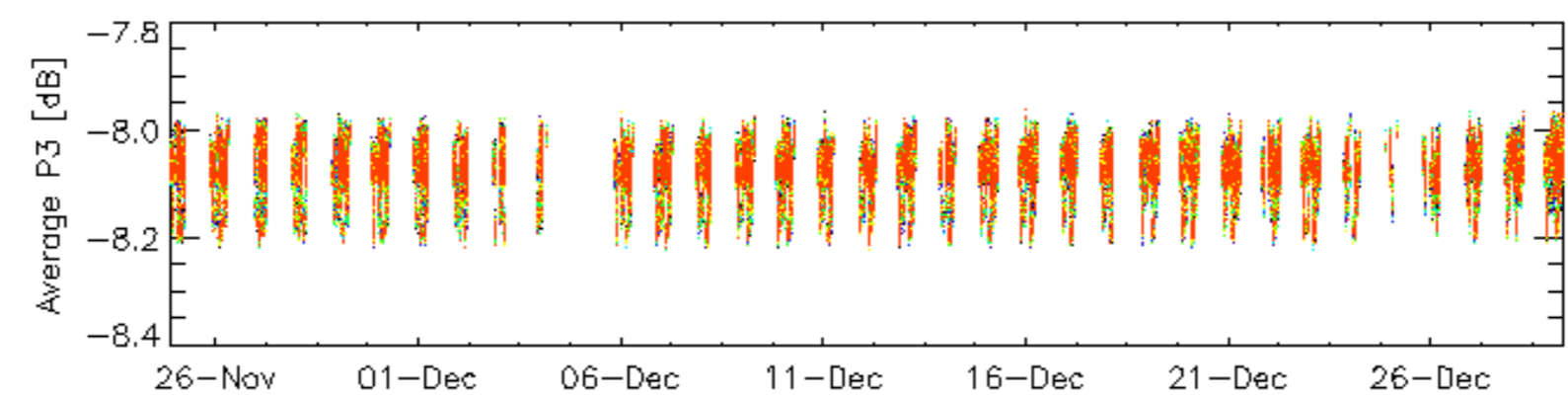
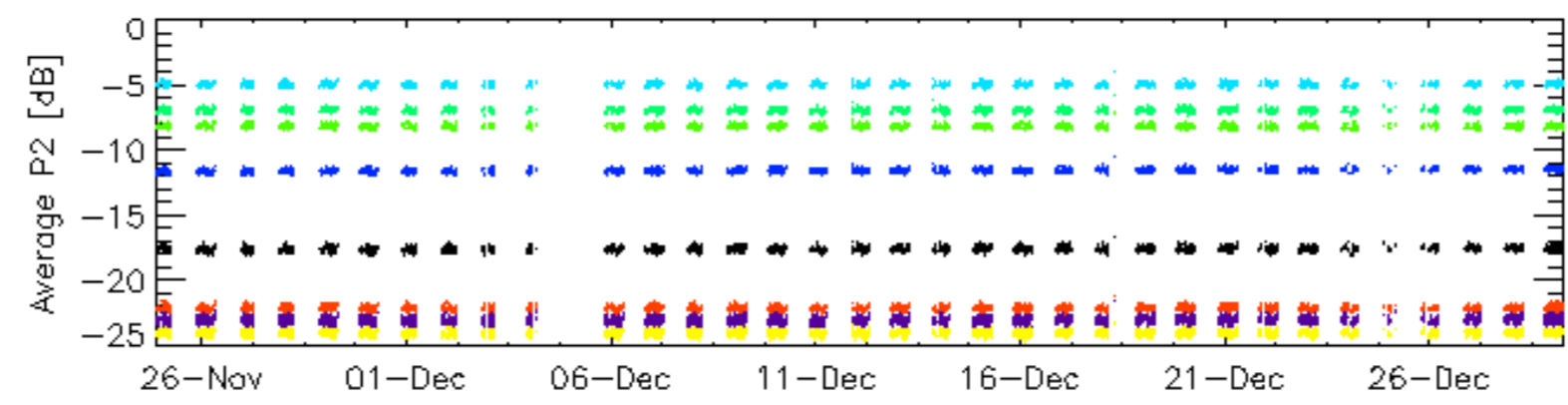
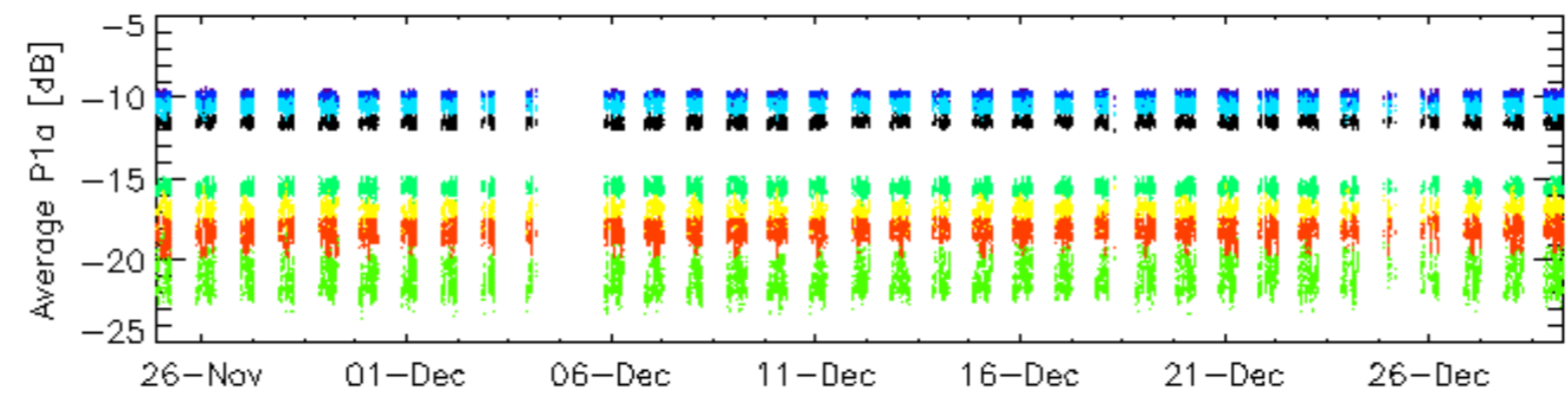
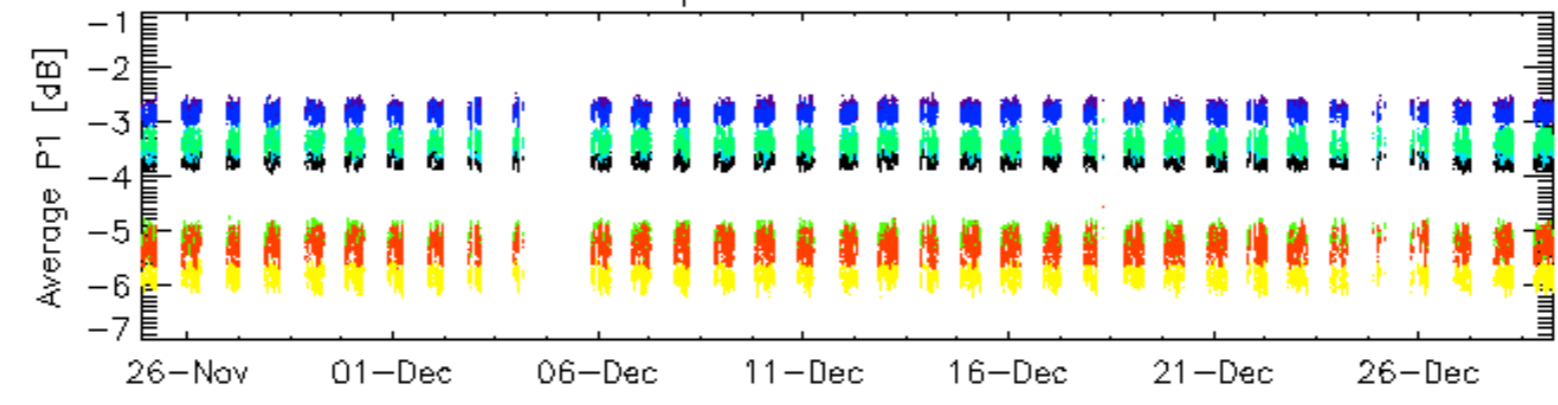


Cal pulses for WVS IS2



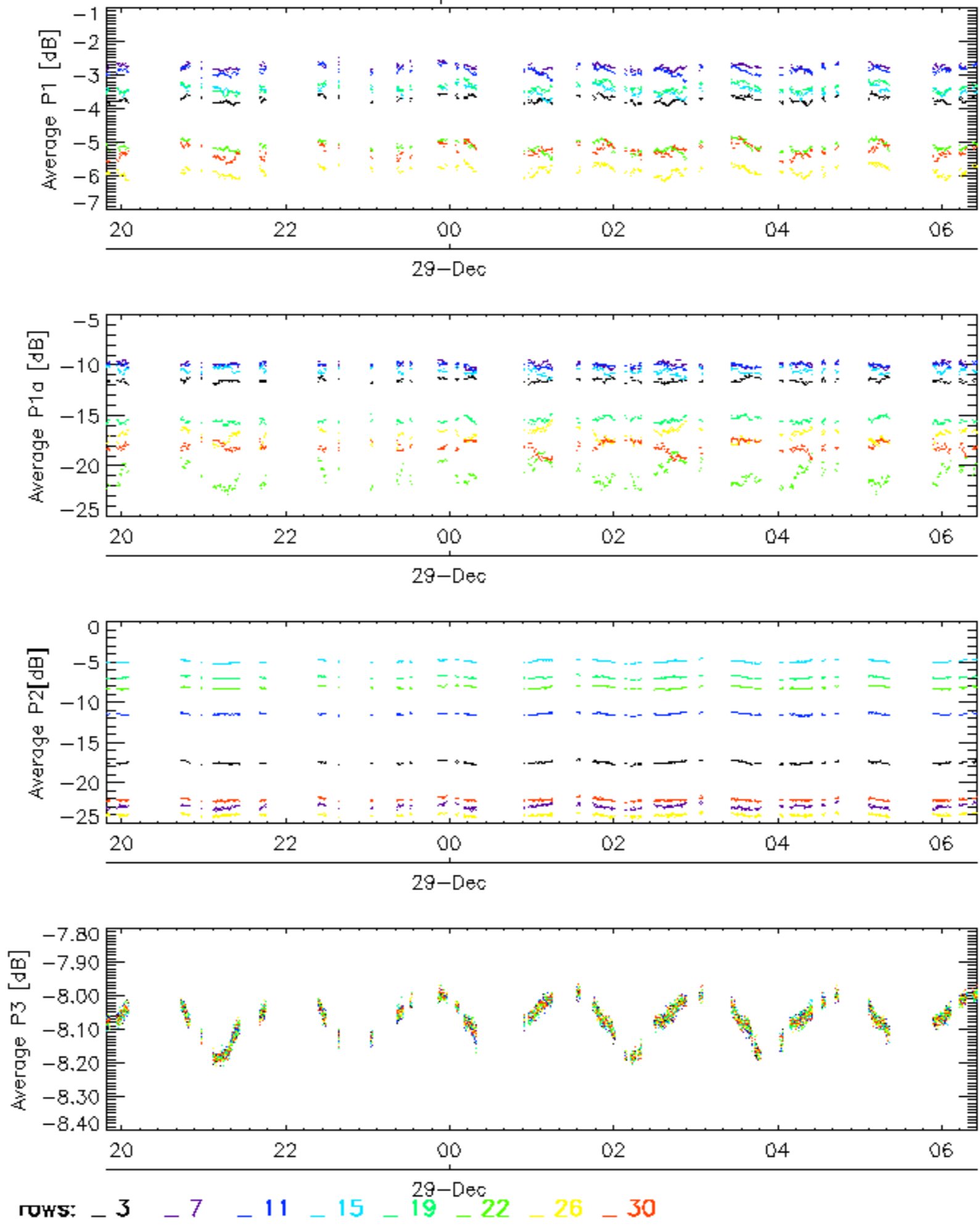
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

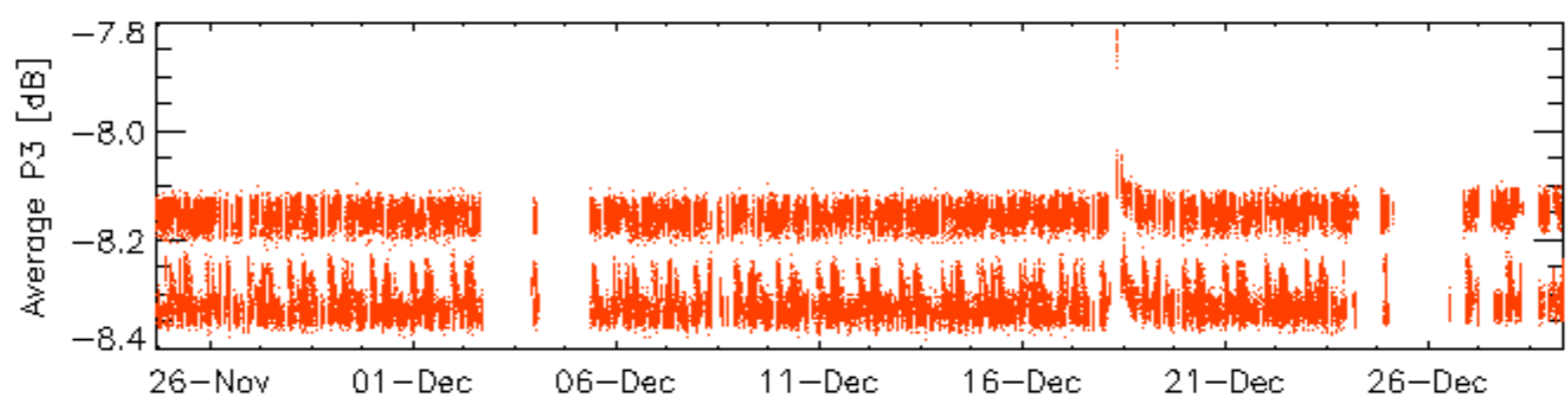
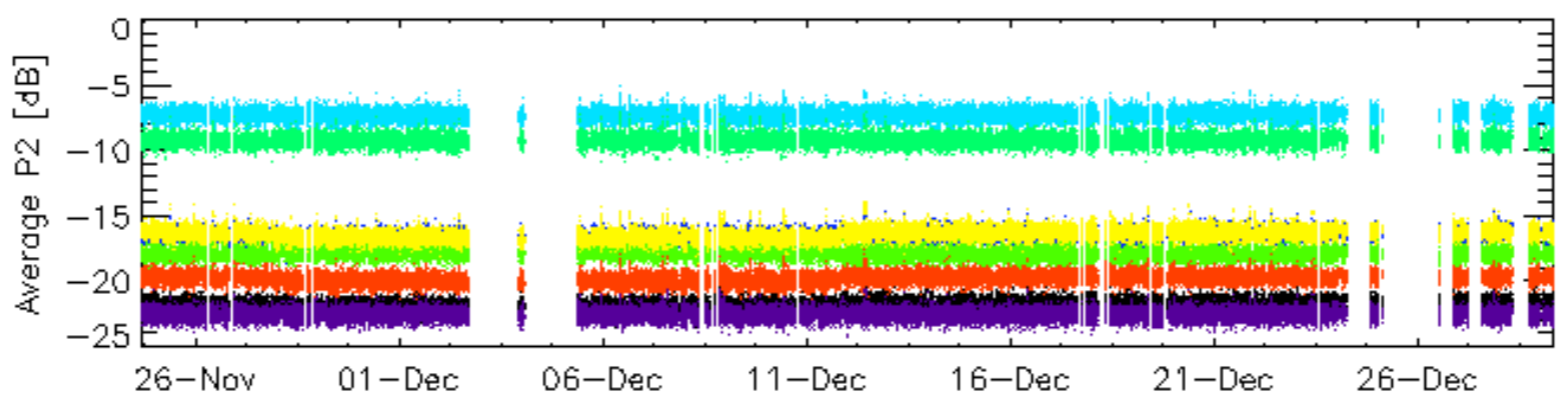
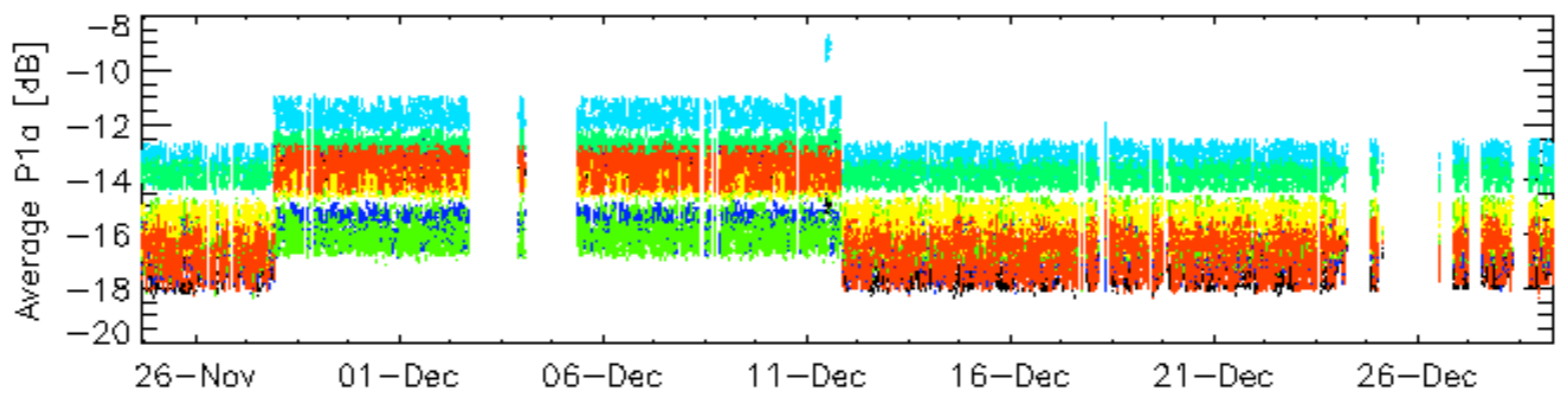
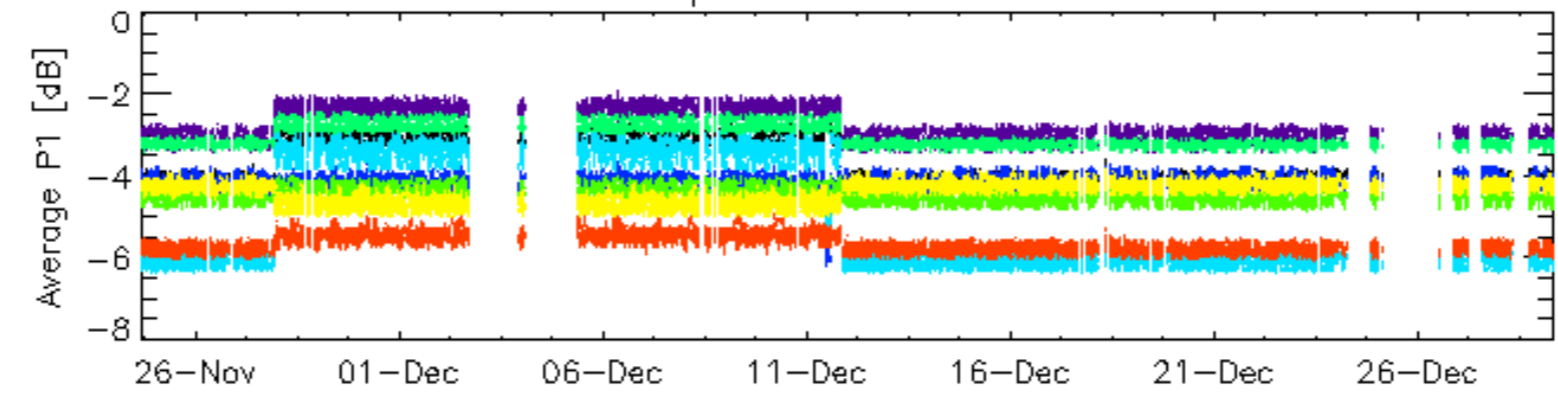


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

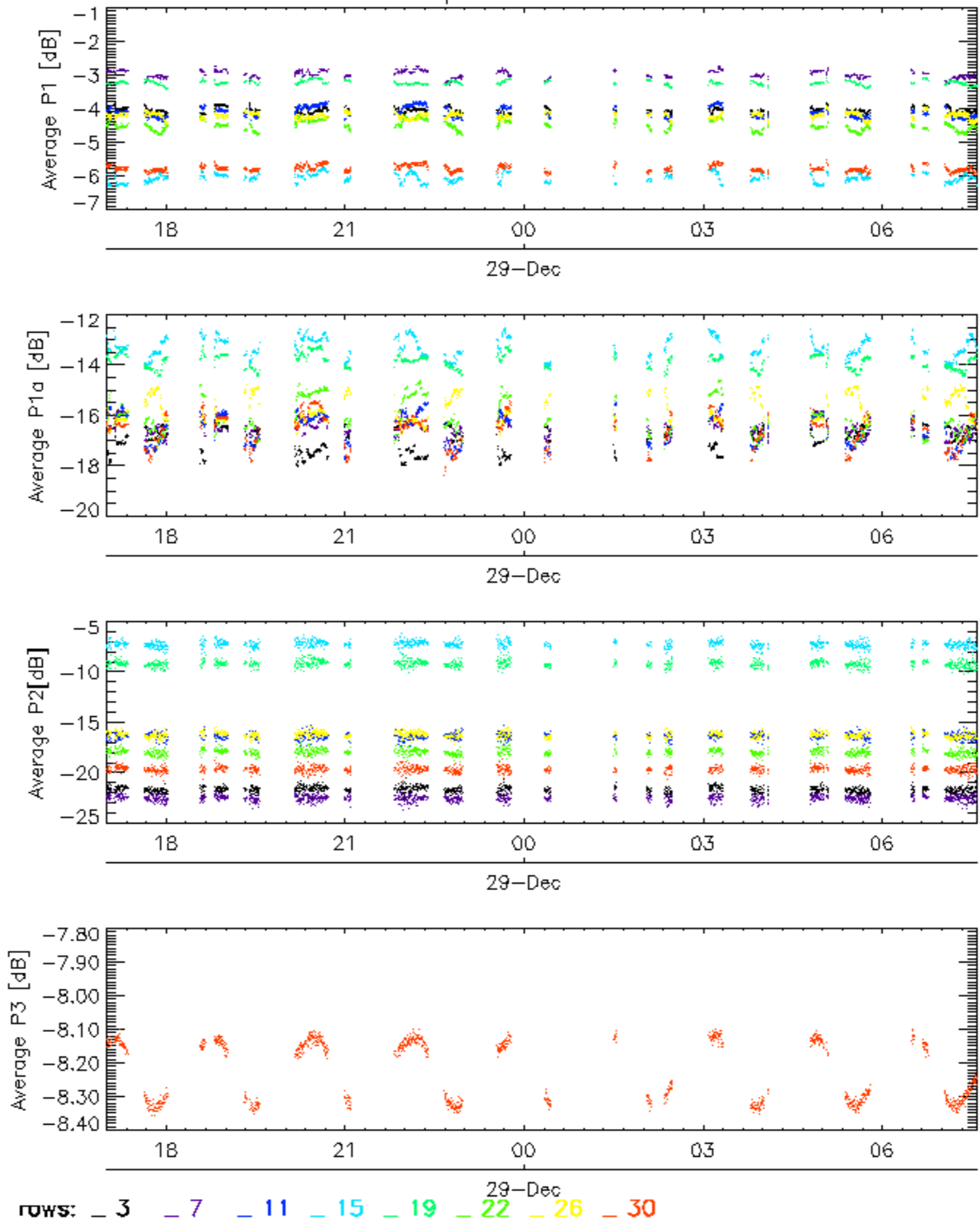


Cal pulses for WVS IS2

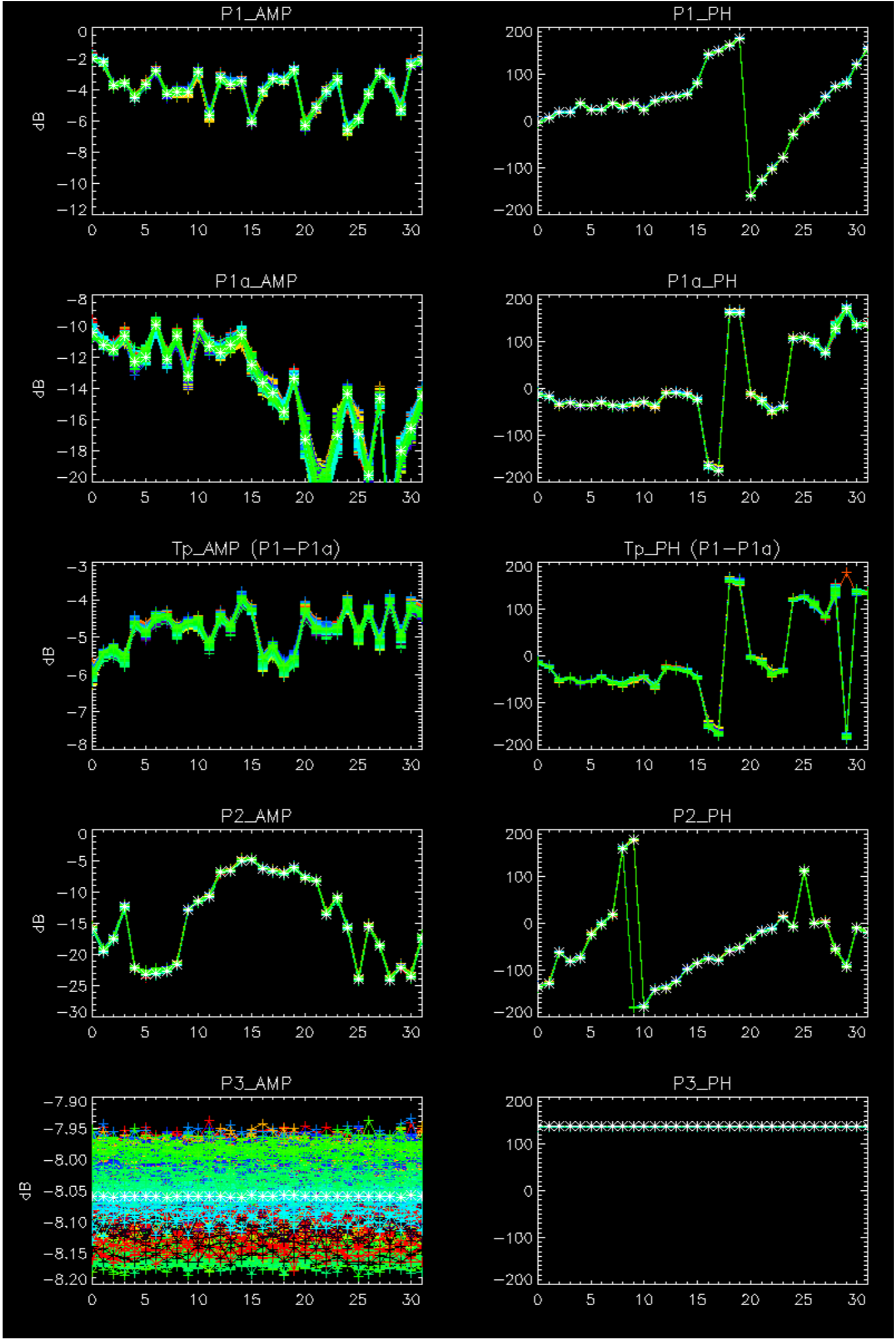


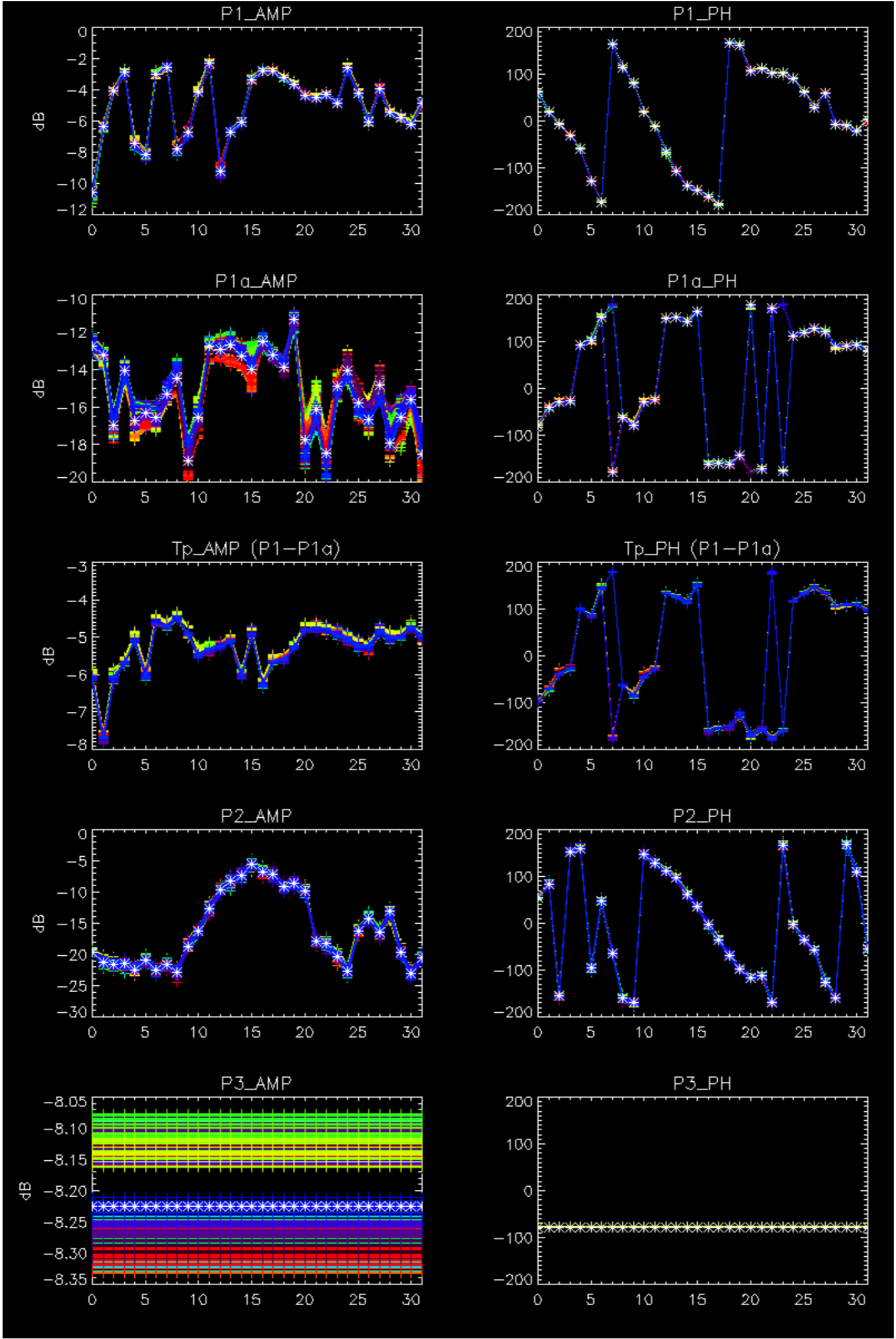
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



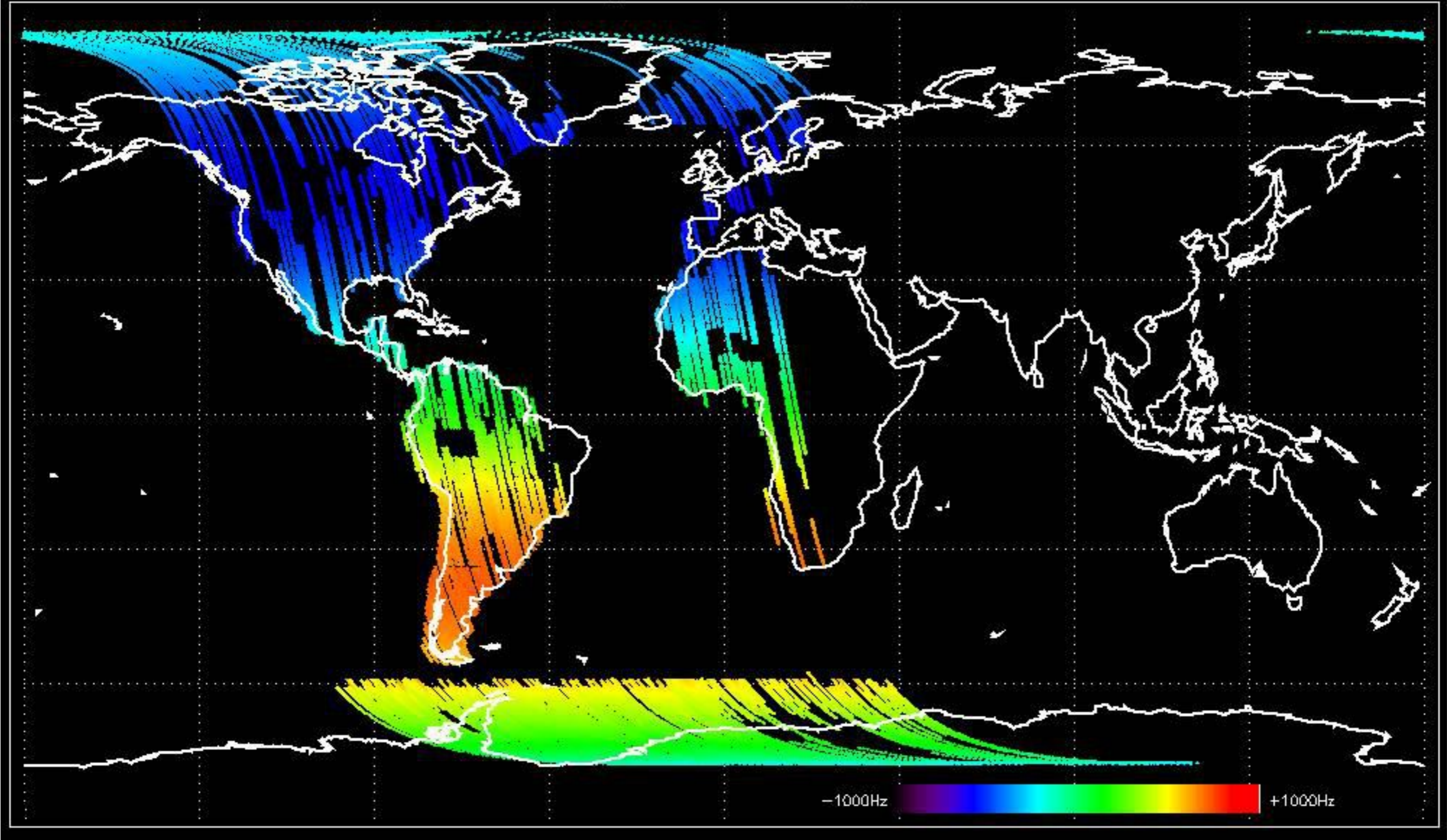
No anomalies observed.



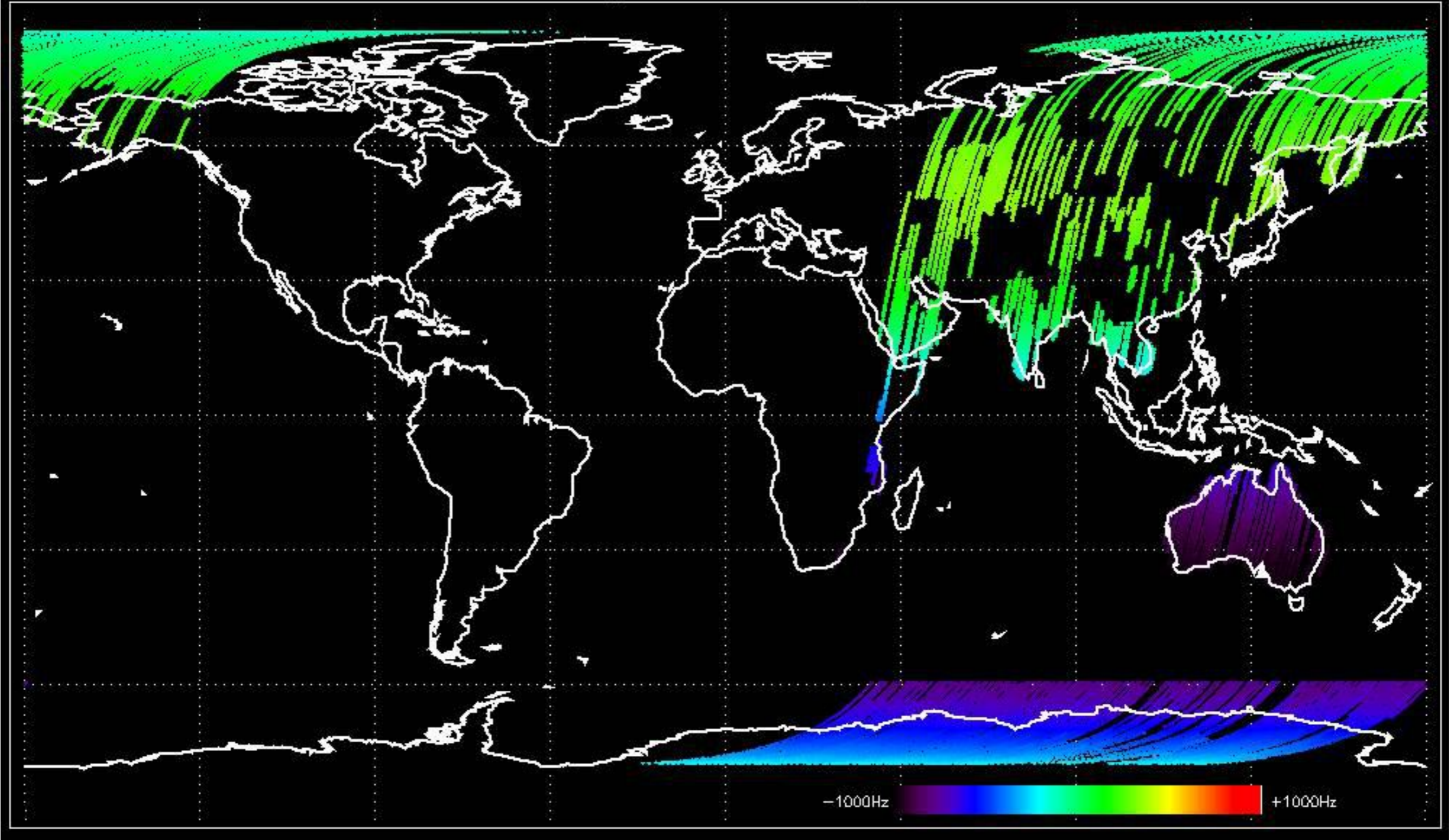


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

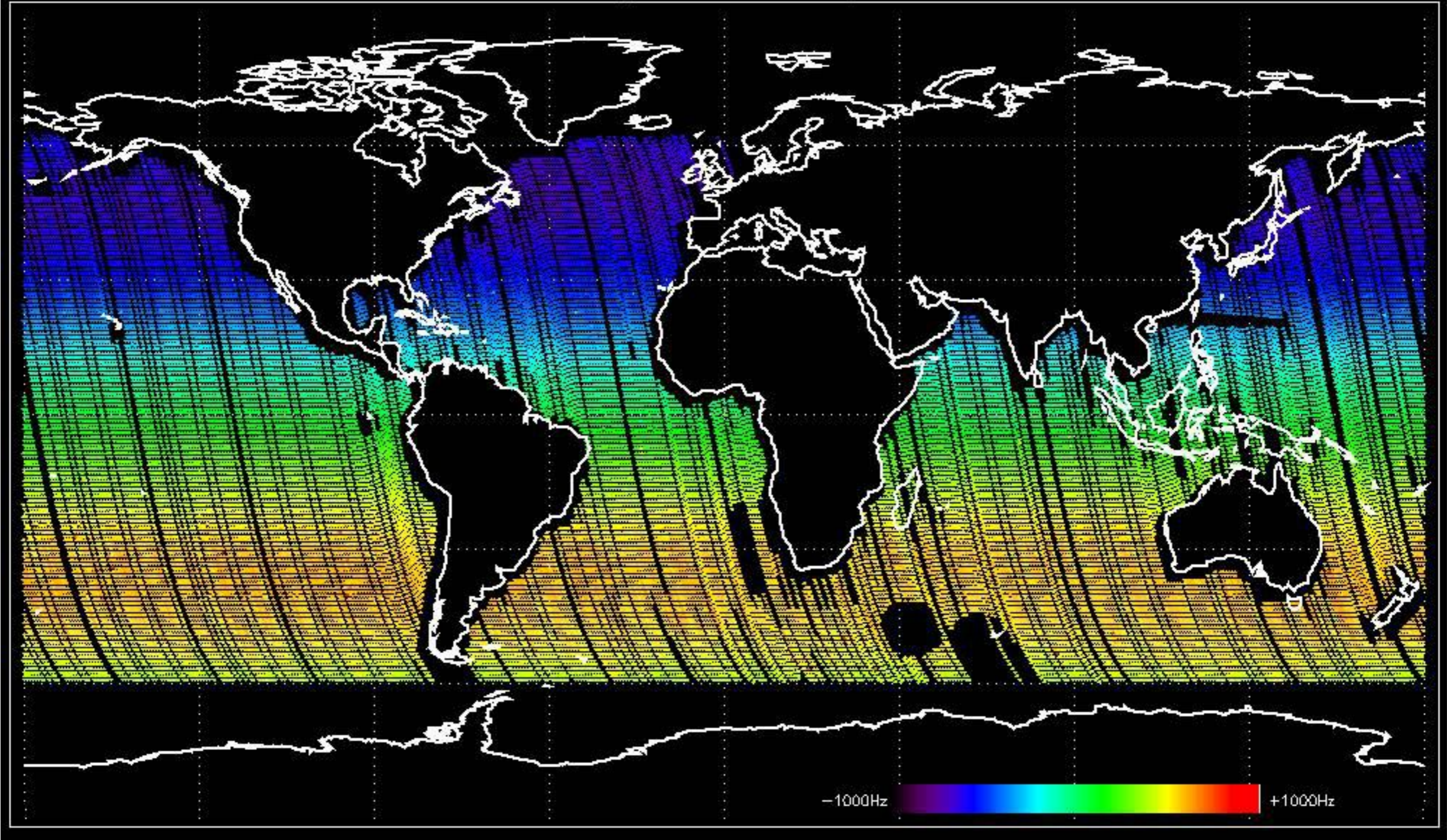
Doppler 'GM1' 'SS1' ascending



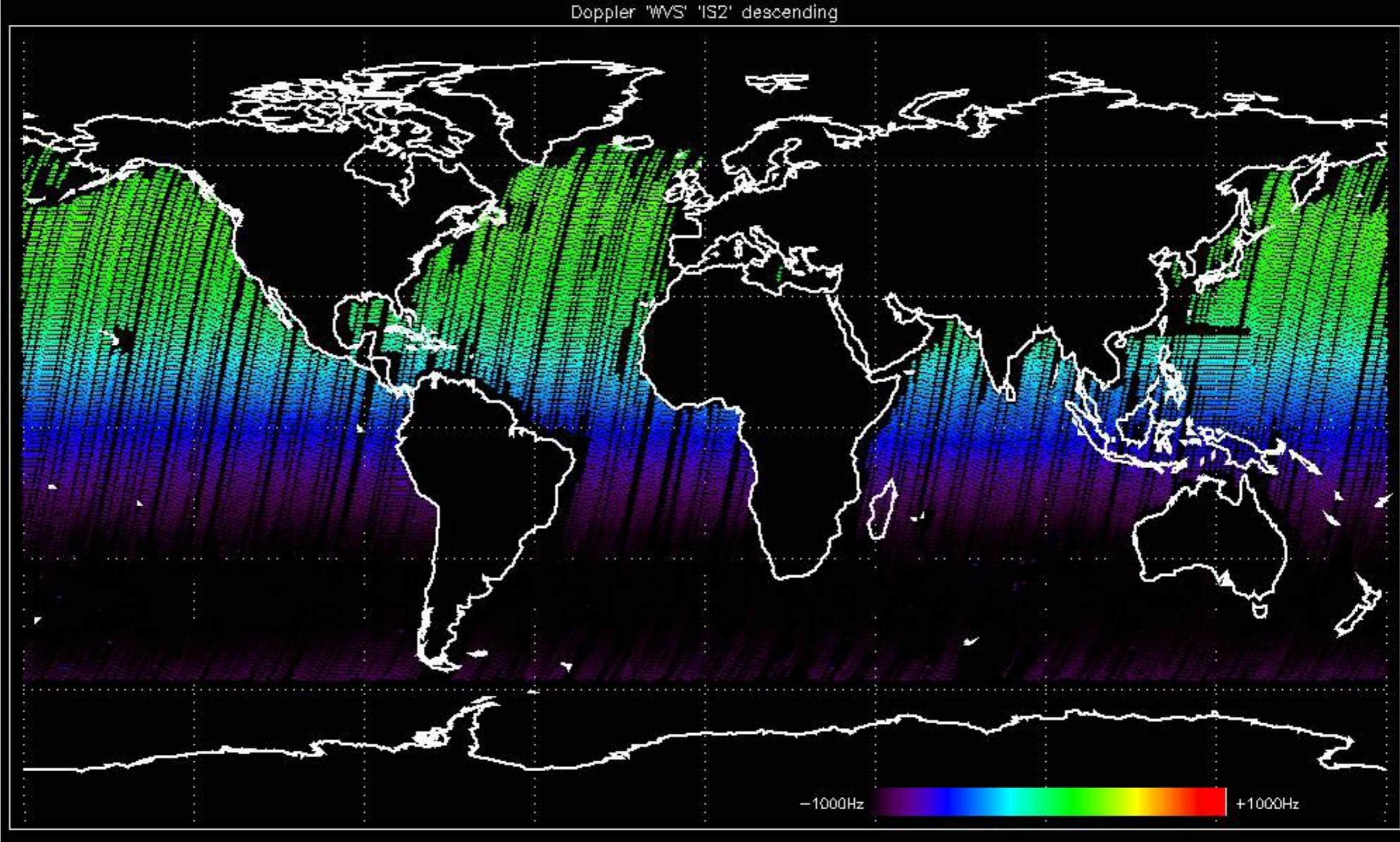
Doppler 'GM1' 'SS1' descending



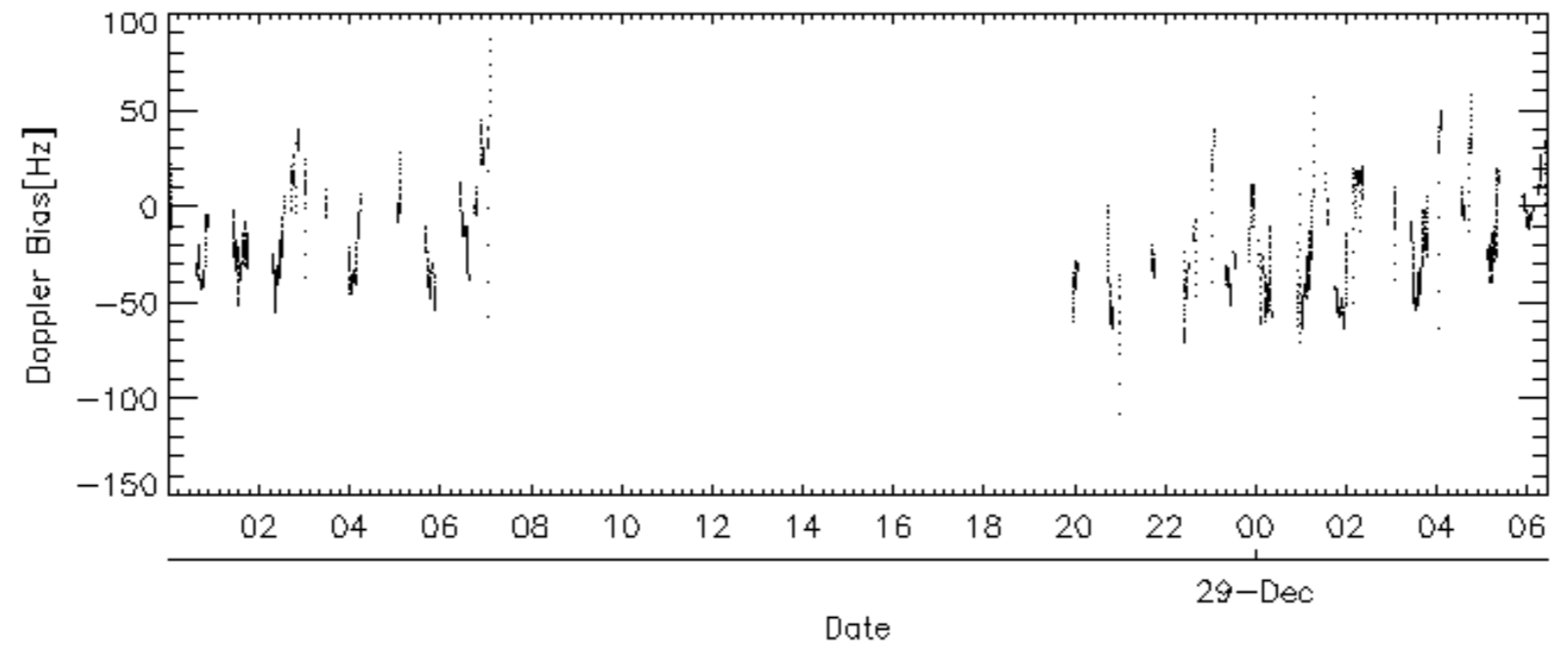
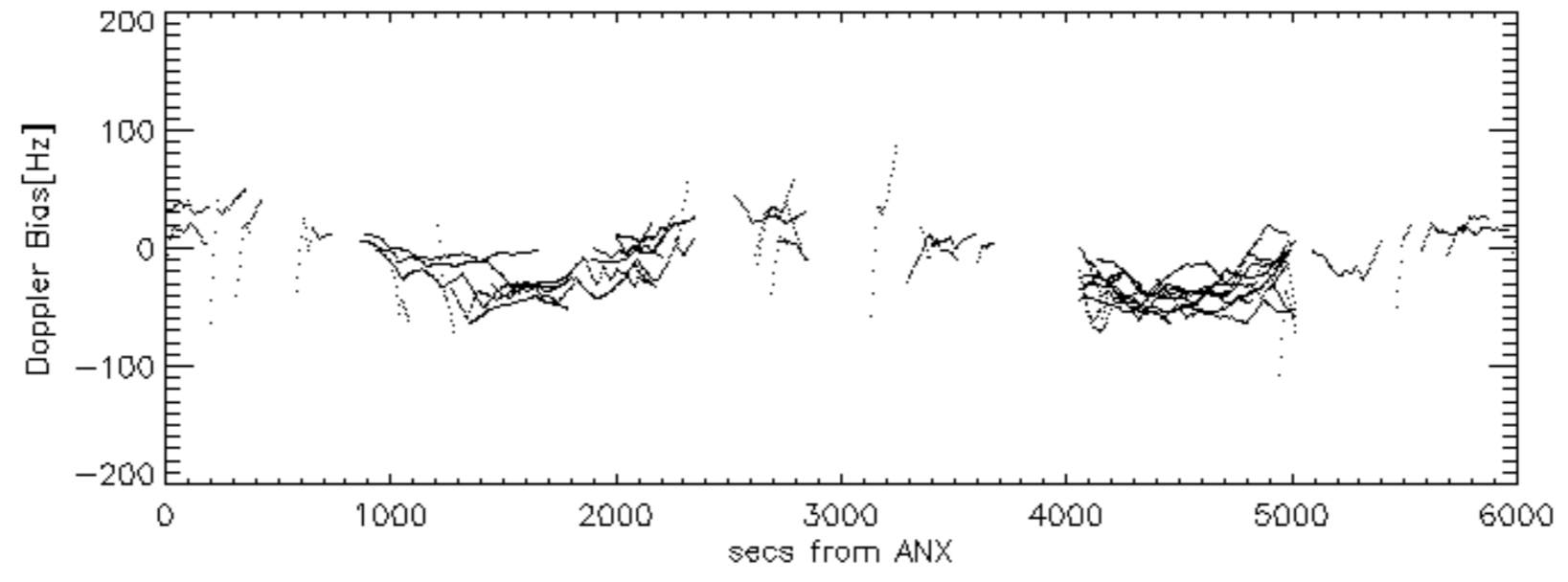
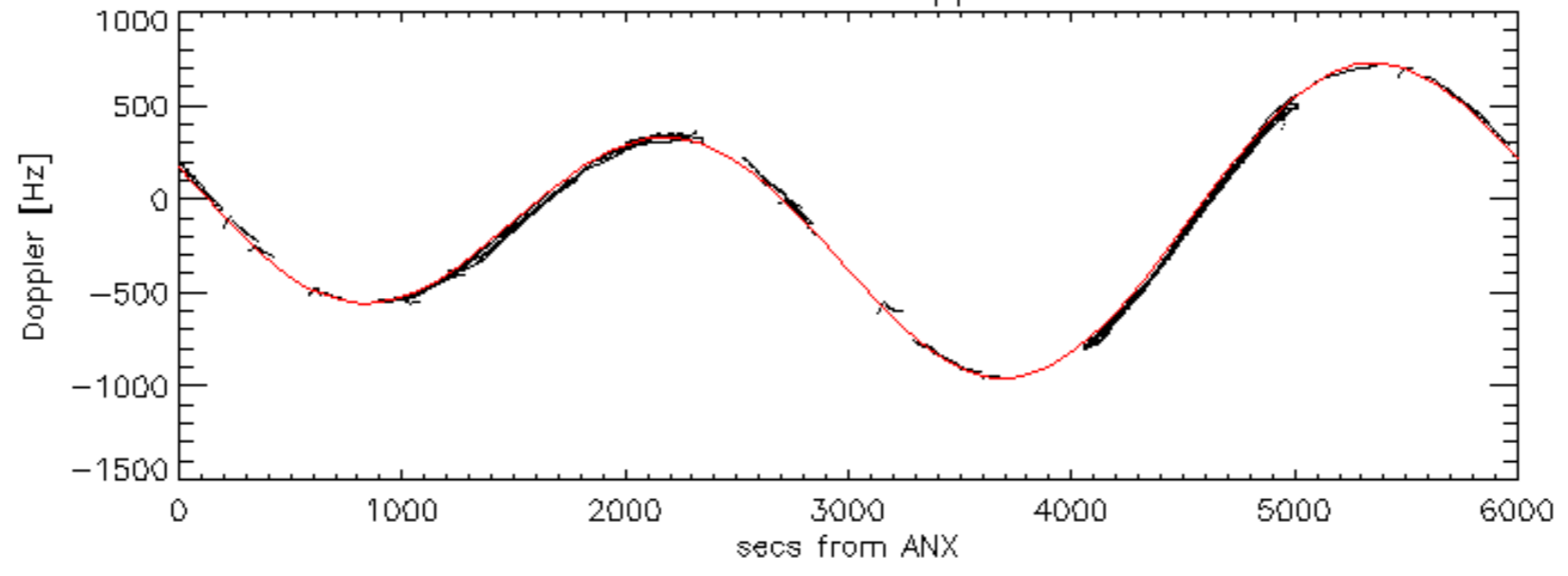
Doppler 'WVS' 'IS2' ascending

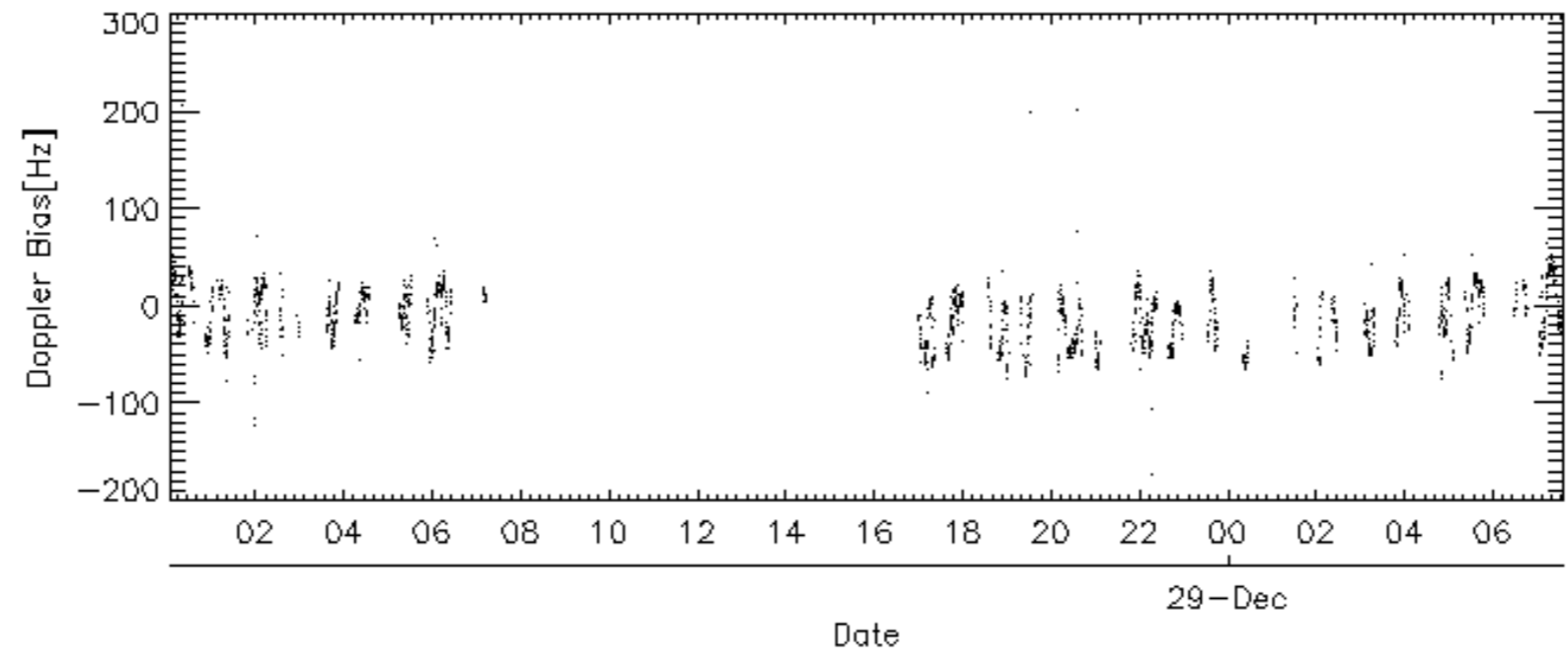
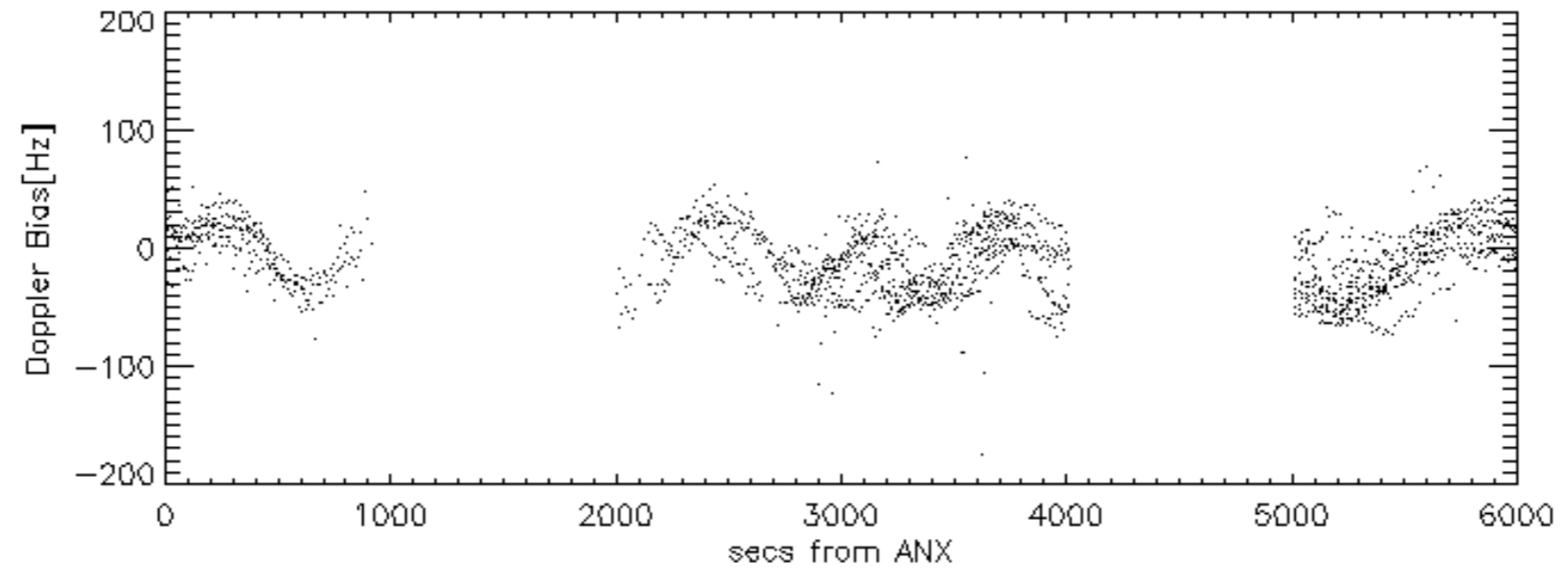
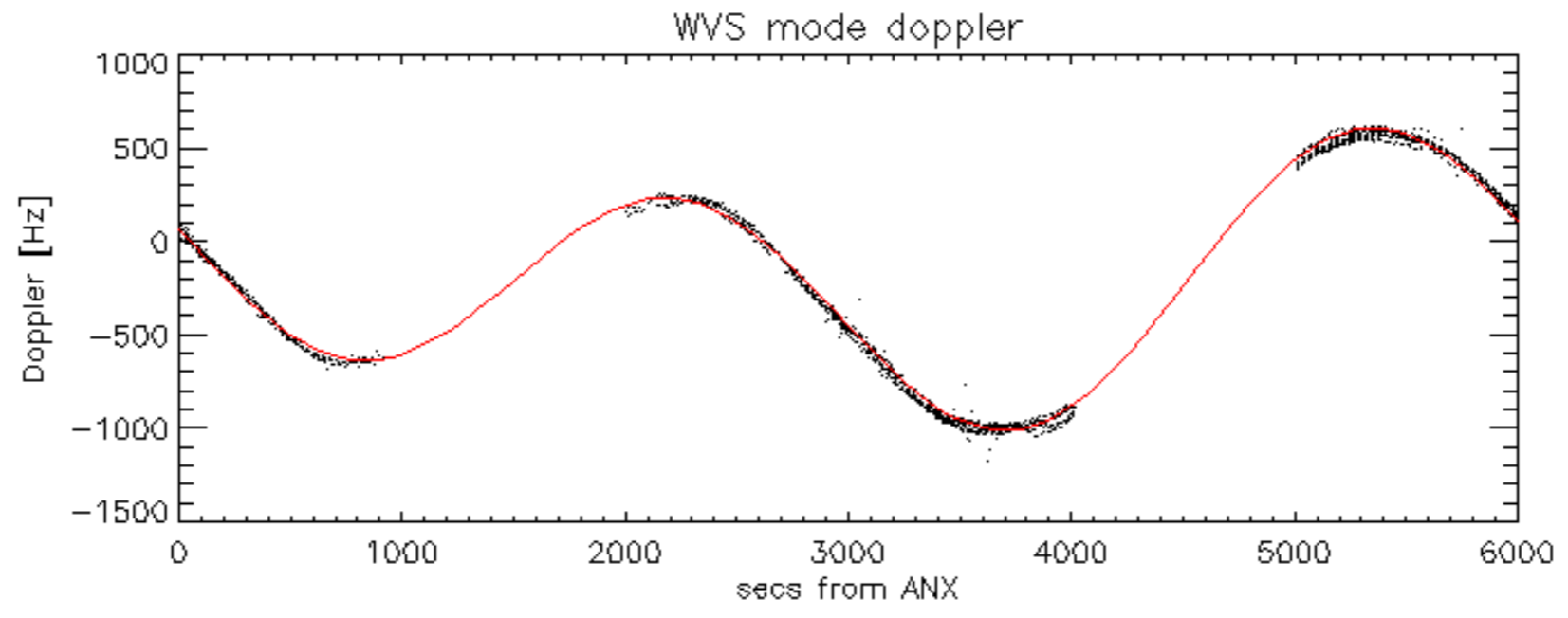


Doppler 'WVS' 'IS2' descending

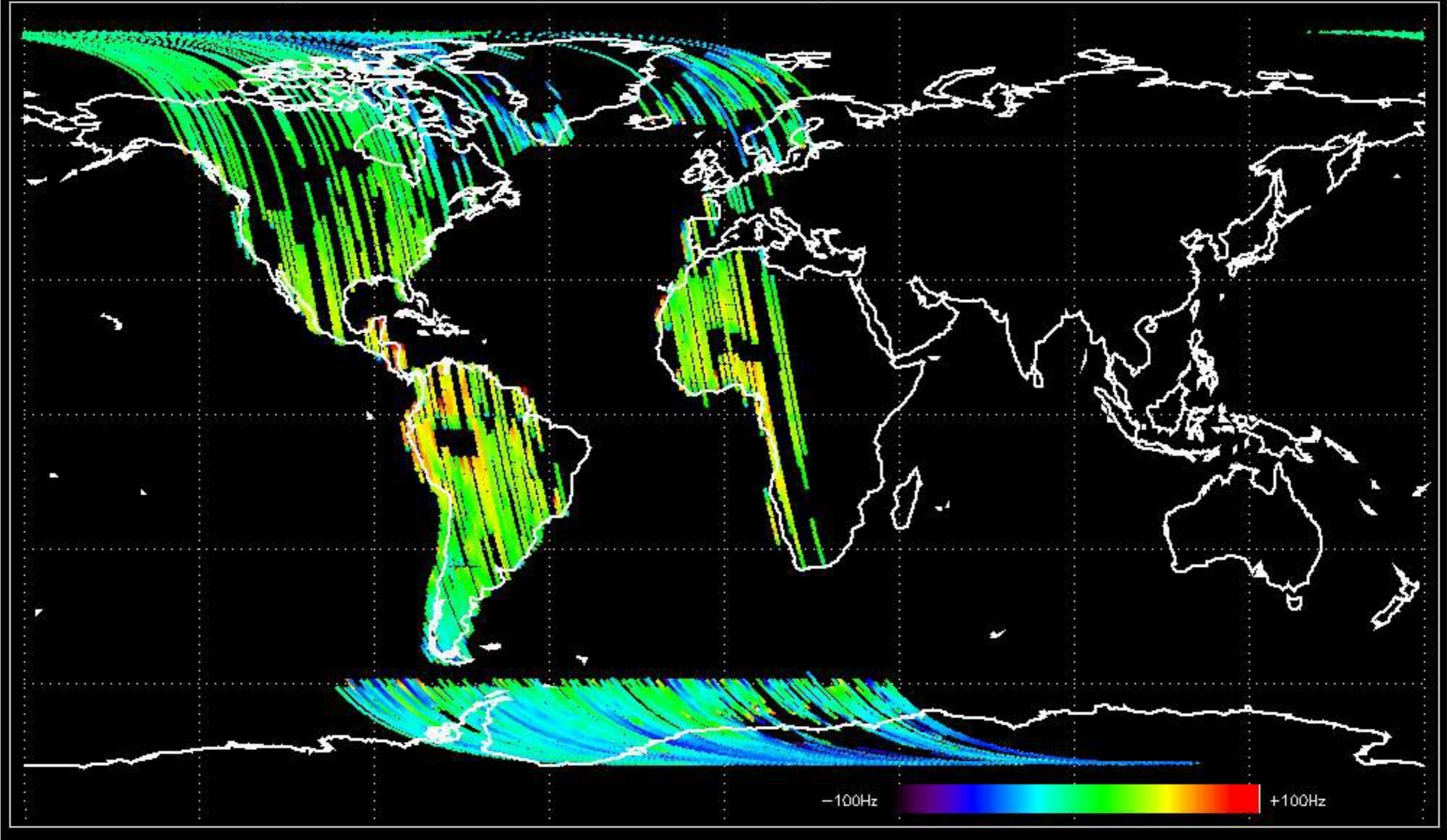


GM1 mode doppler

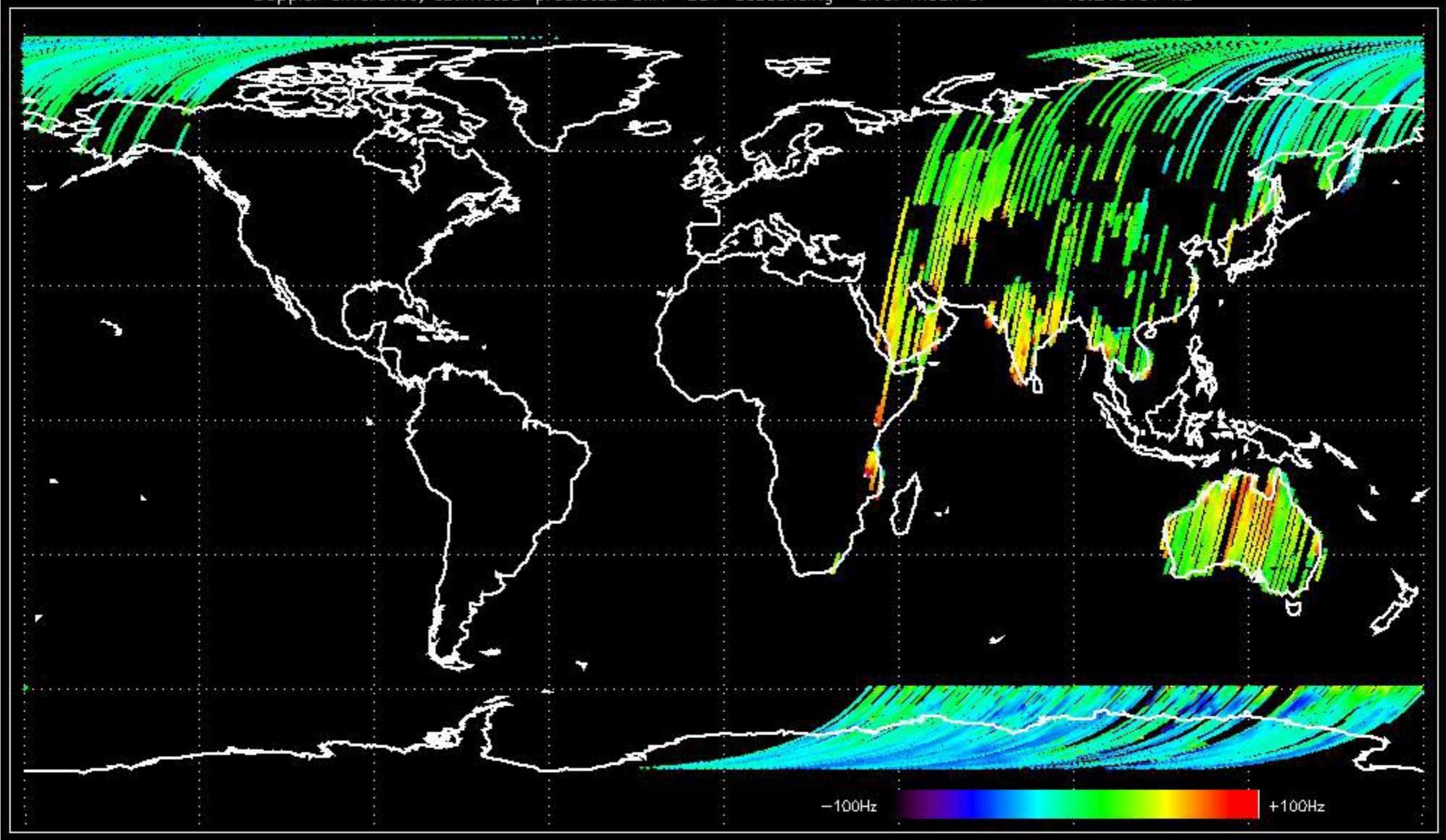




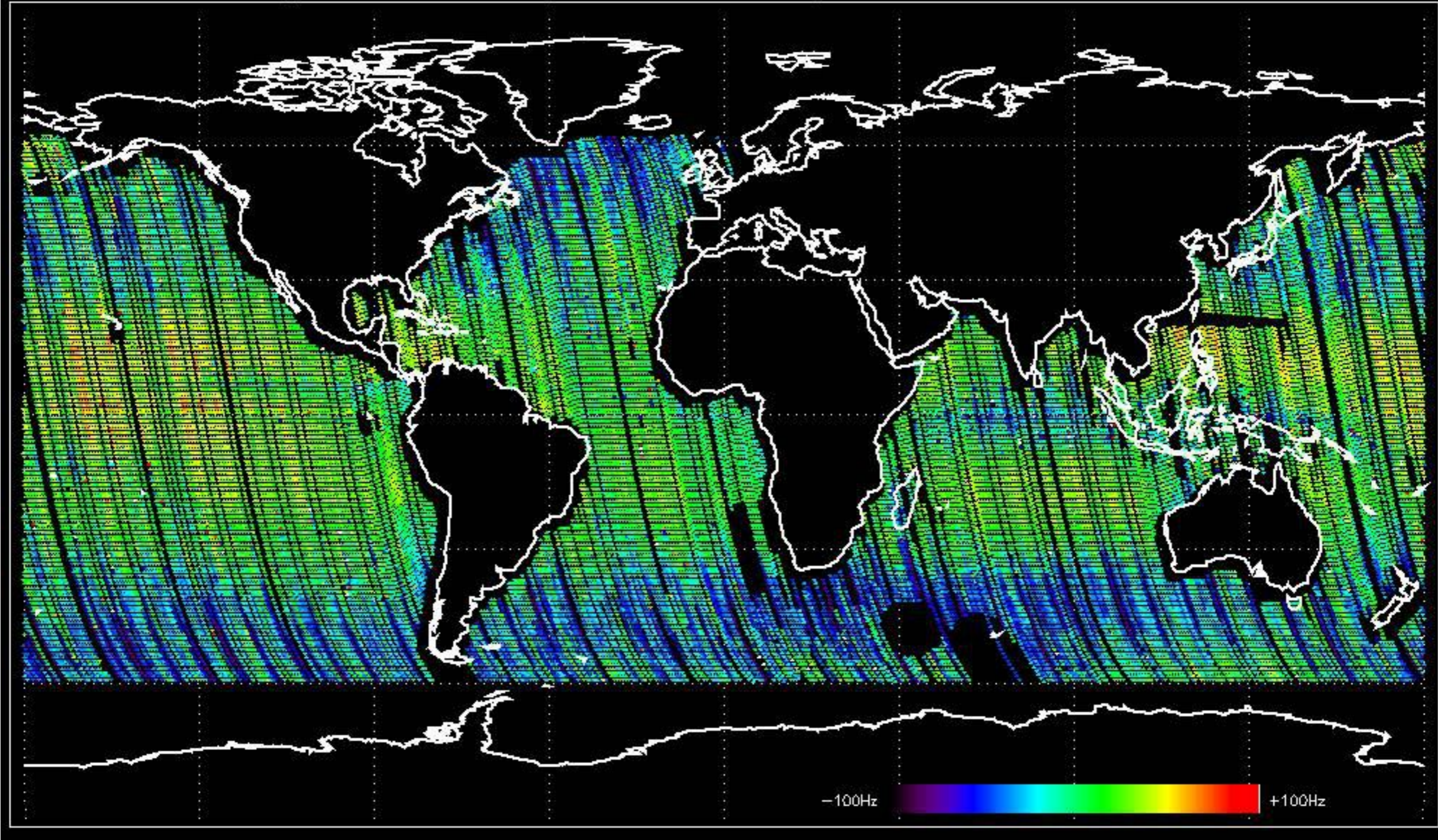
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -14.480332 Hz



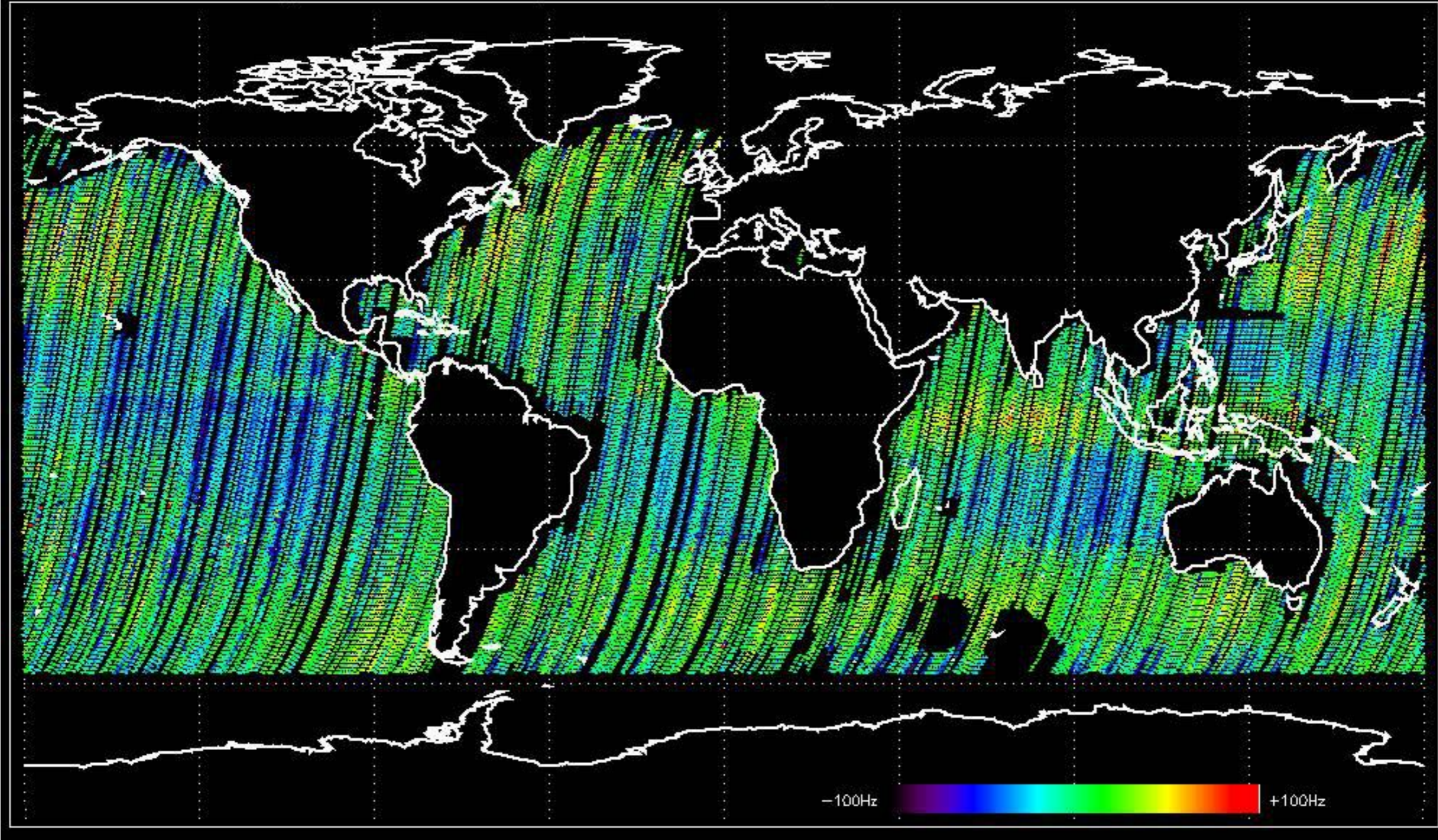
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.216797 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -11.197632 Hz

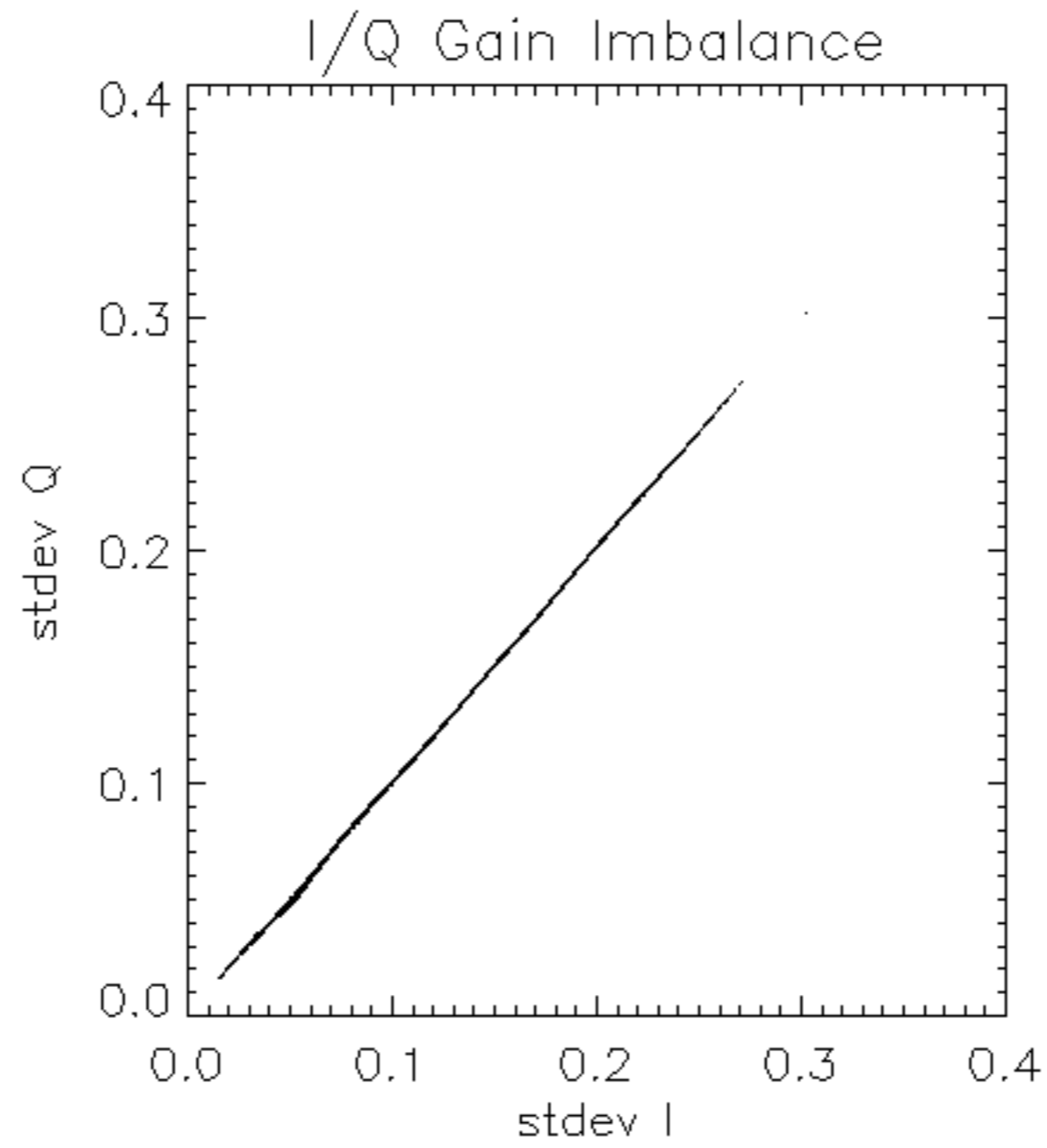


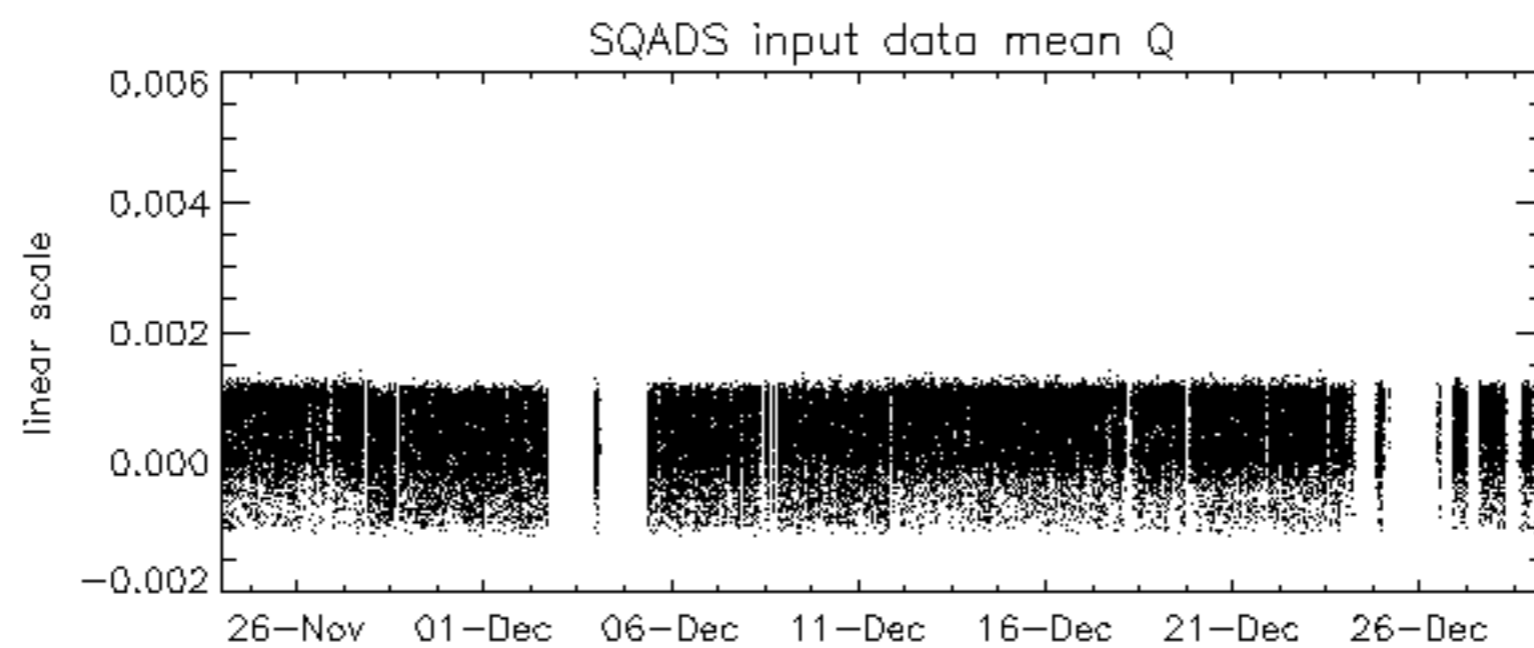
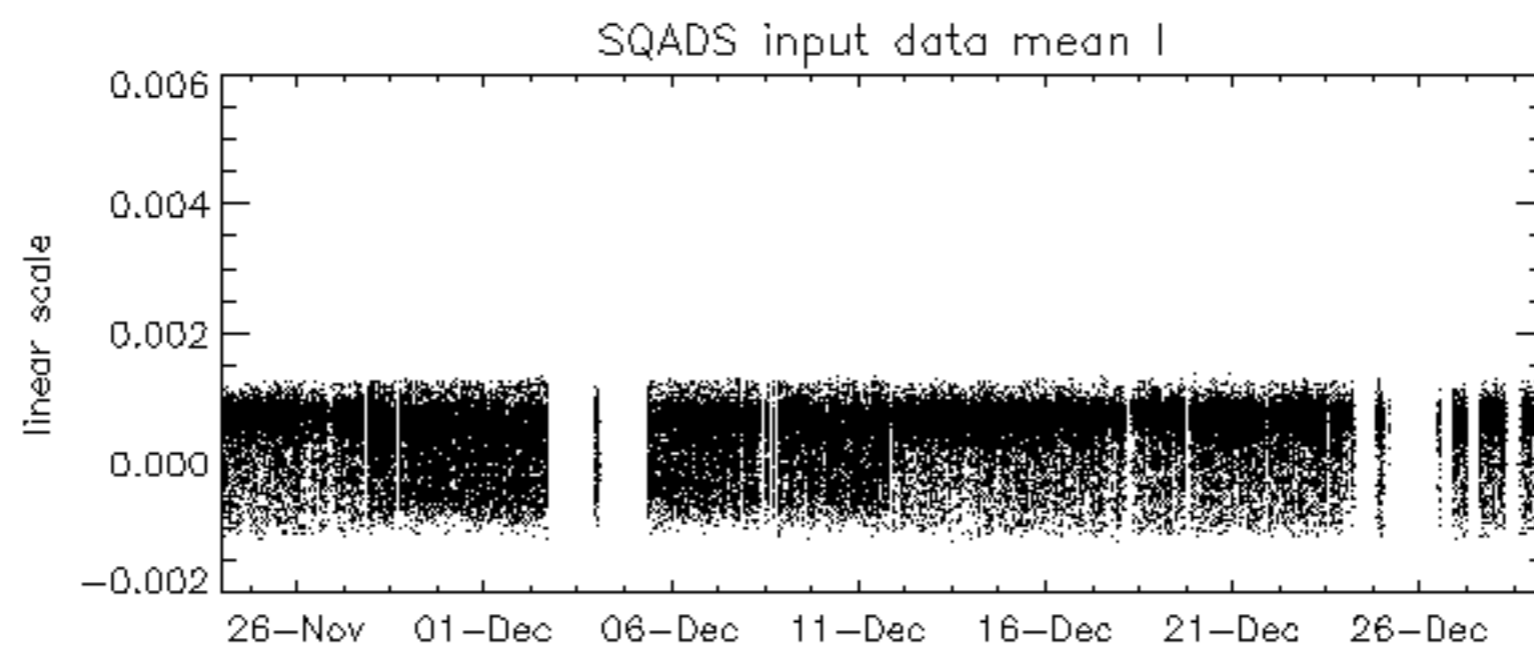
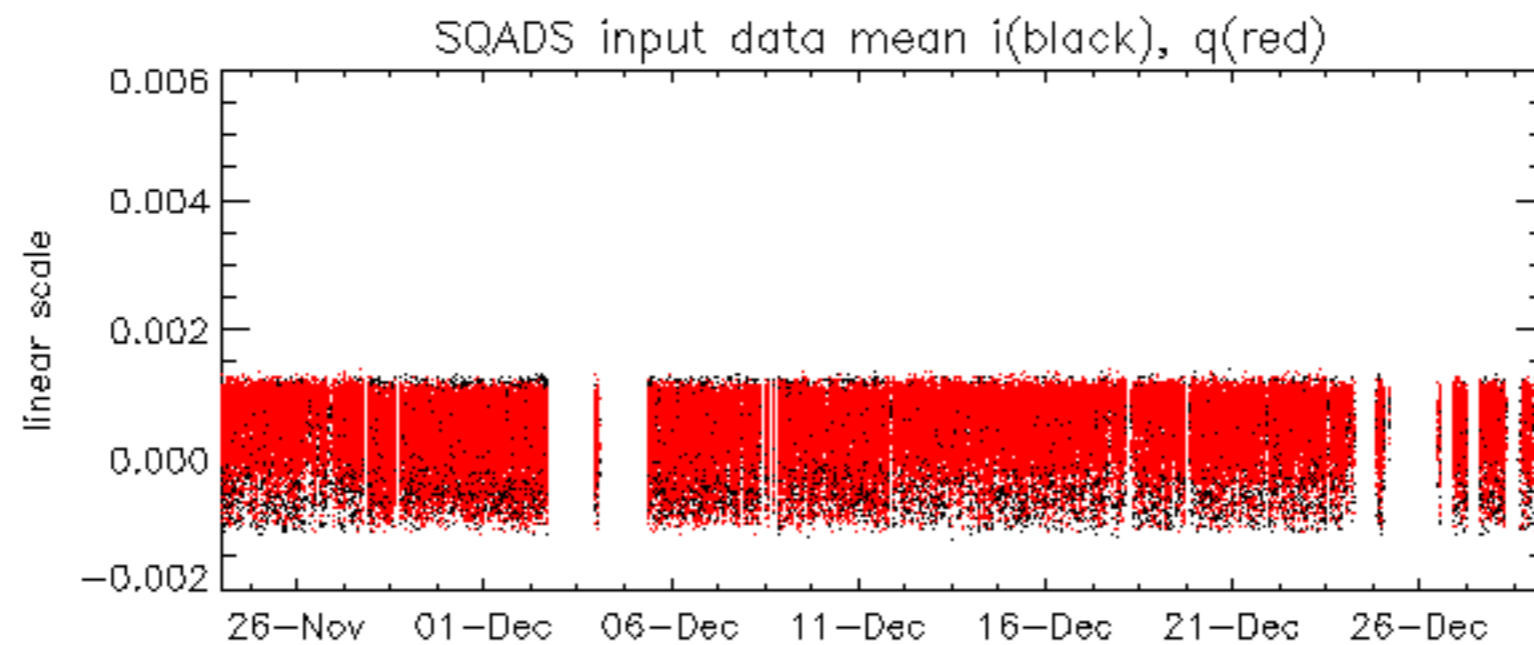
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -14.856424 Hz

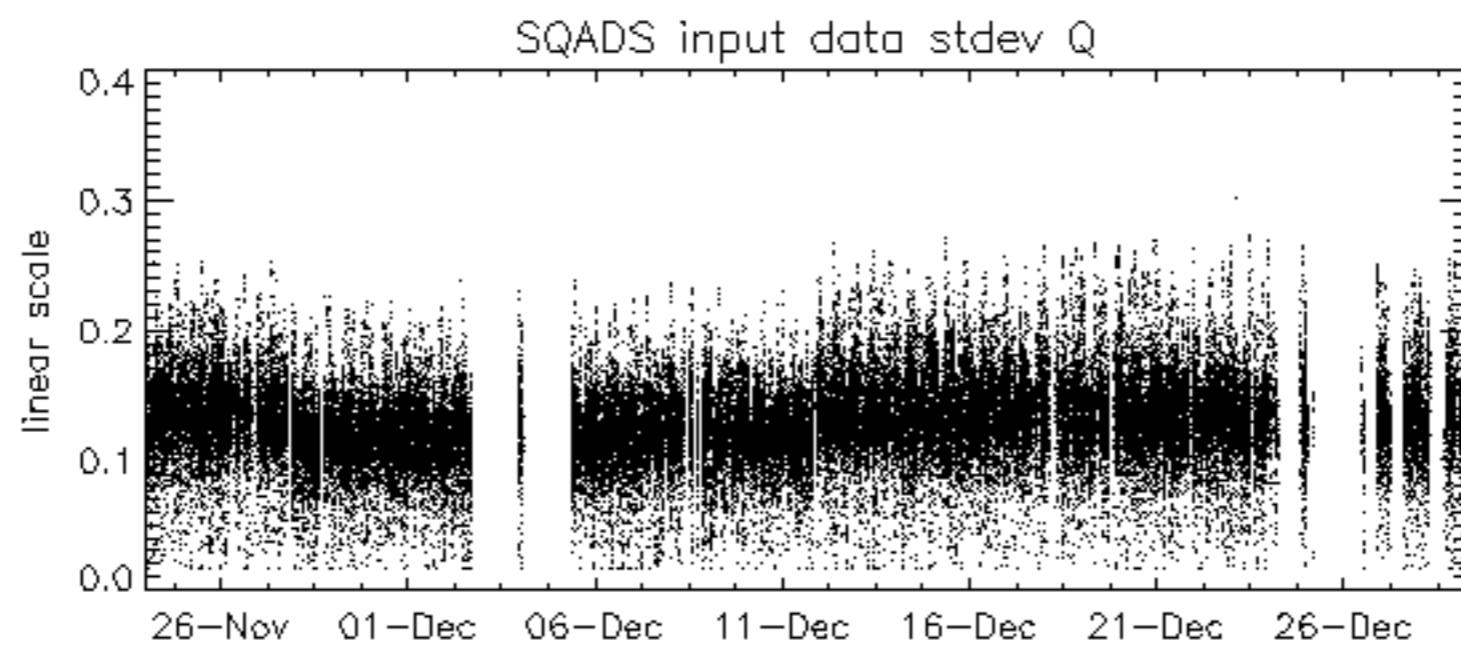
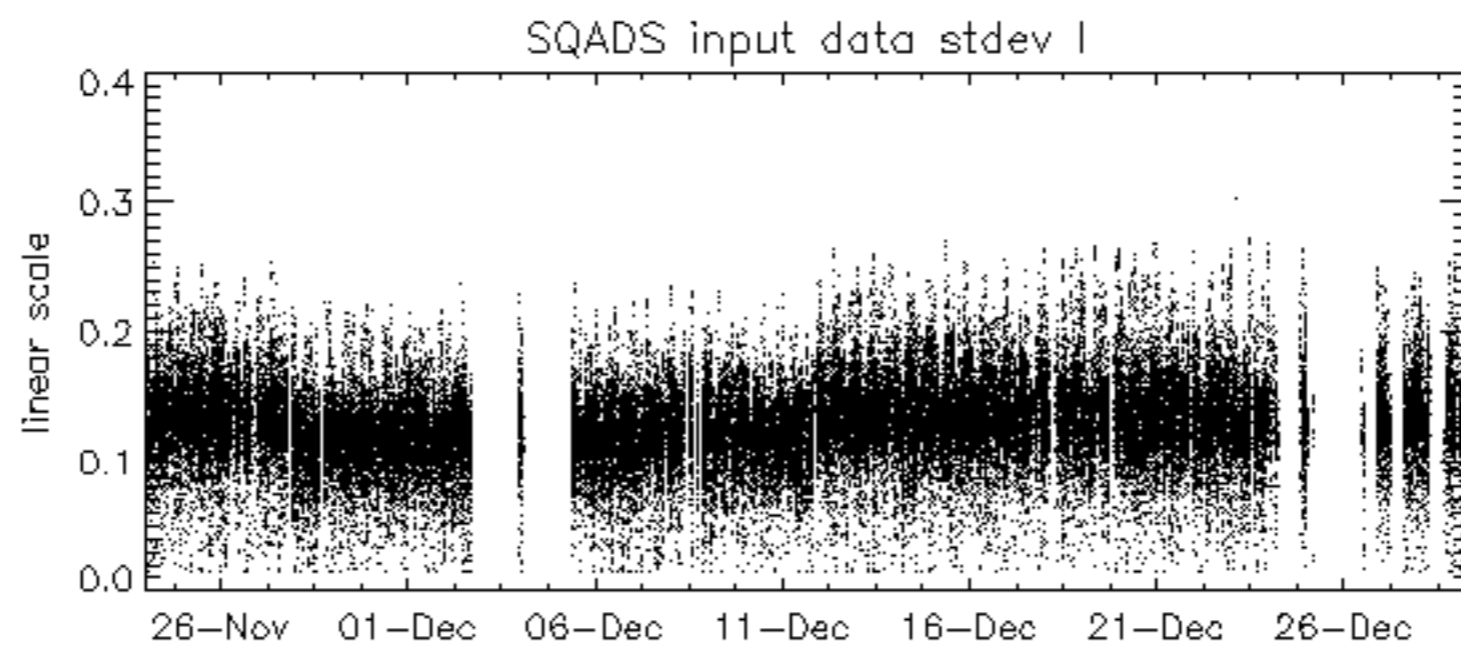
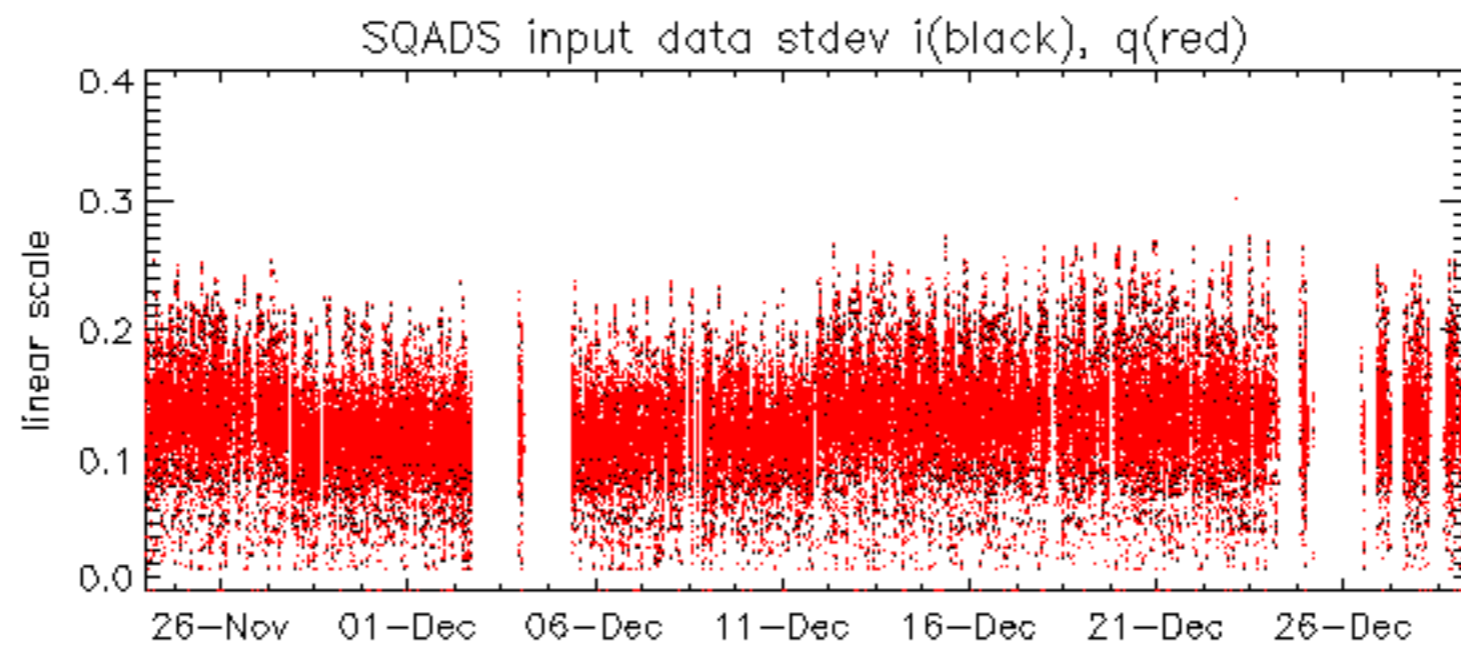


No anomalies observed on available MS products:

No anomalies observed.



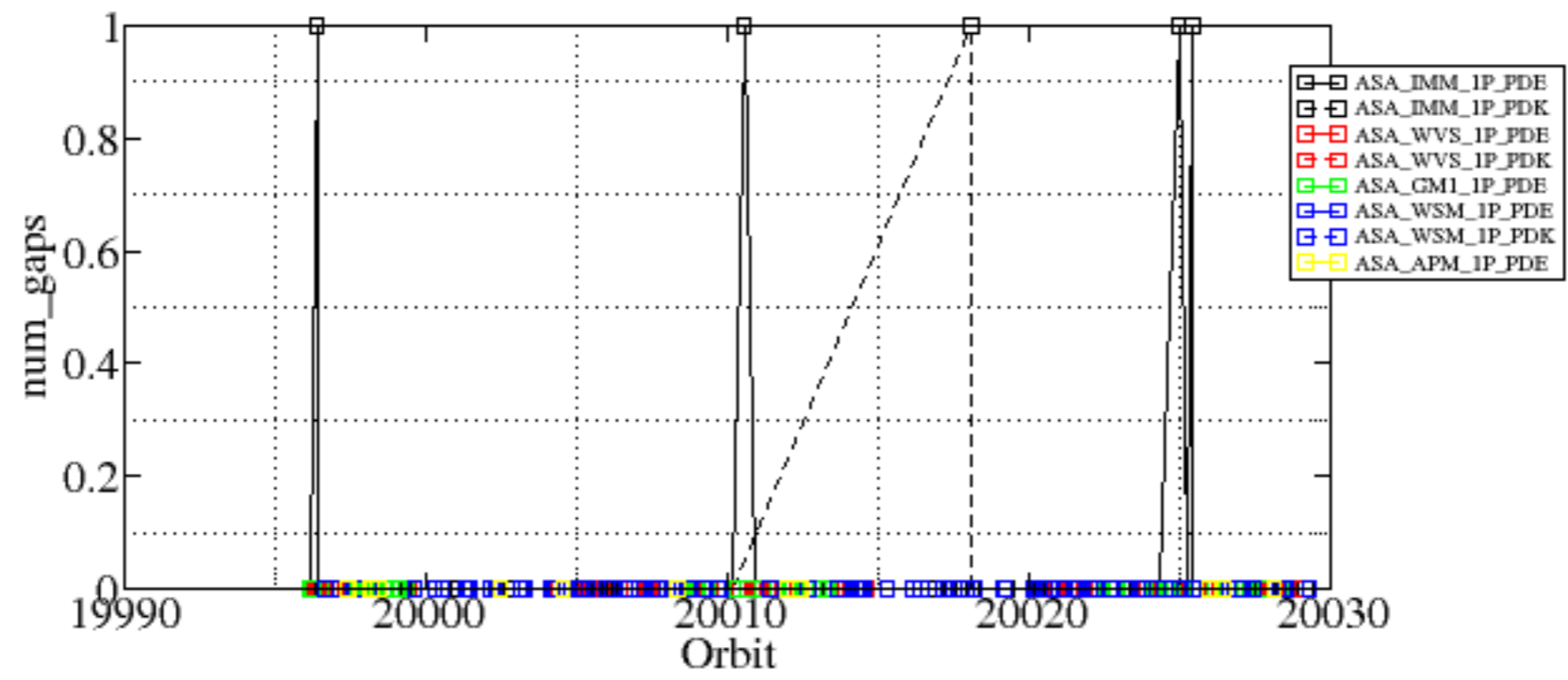


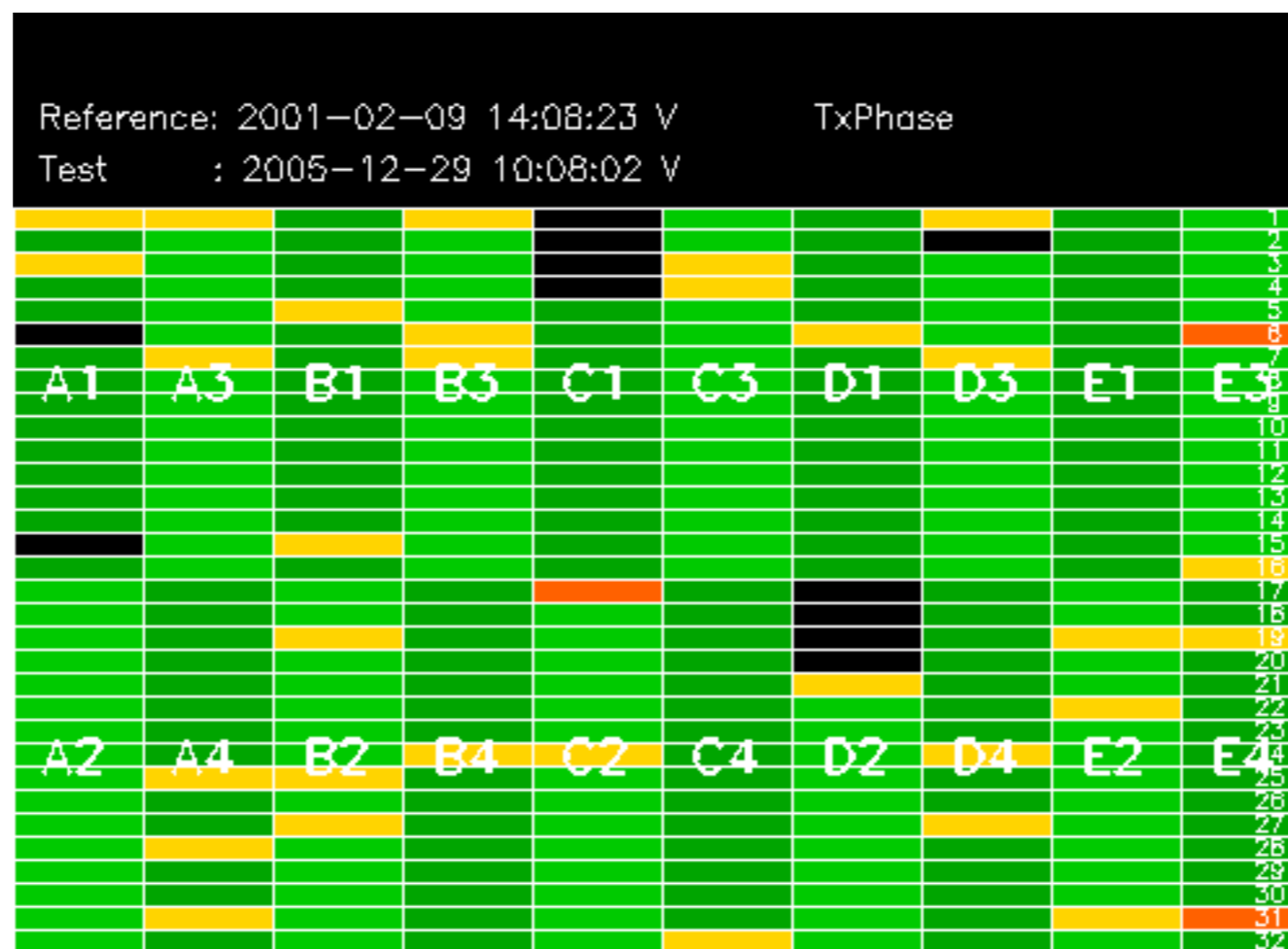


Summary of analysis for the last 3 days 2005122[789]

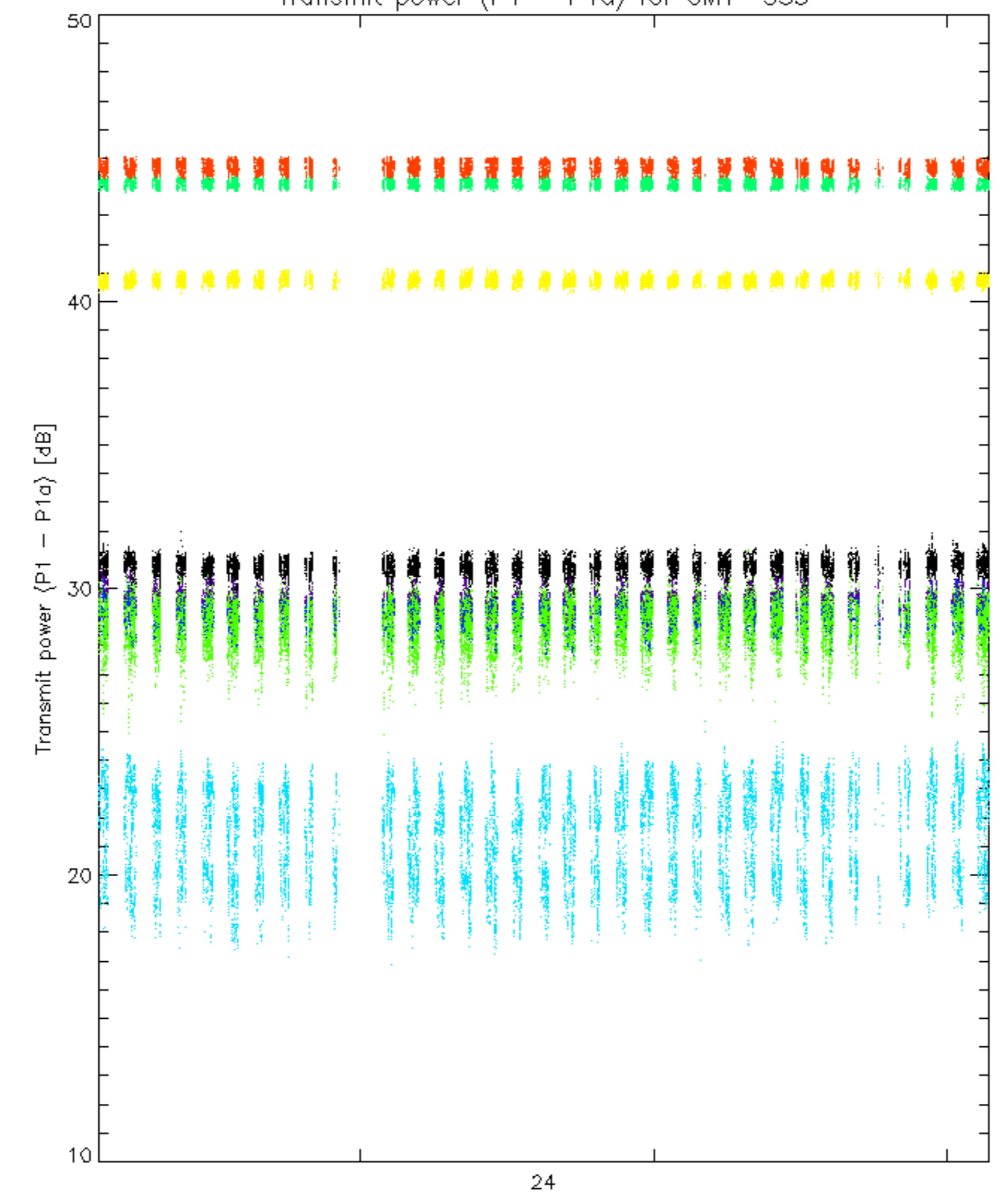
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20051227_003806_000000502043_00403_19996_4808.N1	1	0
ASA_IMM_1PNPDE20051228_002245_000003782043_00417_20010_4893.N1	1	0
ASA_IMM_1PNPDE20051229_003425_000001302043_00431_20024_5024.N1	1	0
ASA_IMM_1PNPDE20051229_011742_000000362043_00432_20025_5054.N1	1	0
ASA_IMM_1PNPDK20051228_130204_000000822043_00425_20018_9725.N1	1	0
ASA_WSM_1PNPDE20051227_164743_000001832043_00413_20006_5861.N1	0	8
ASA_WSM_1PNPDE20051228_184007_000000672043_00428_20021_6052.N1	0	33
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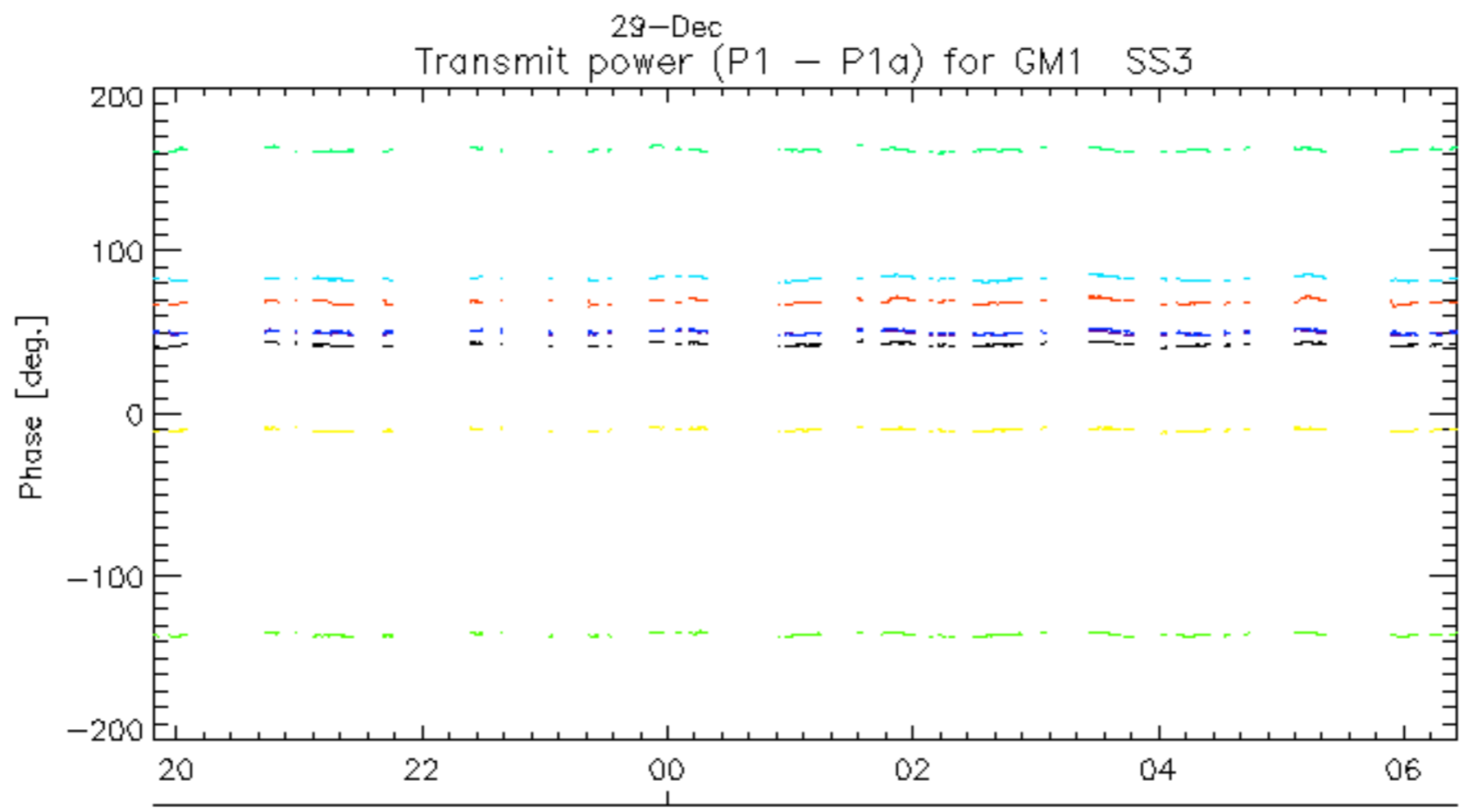
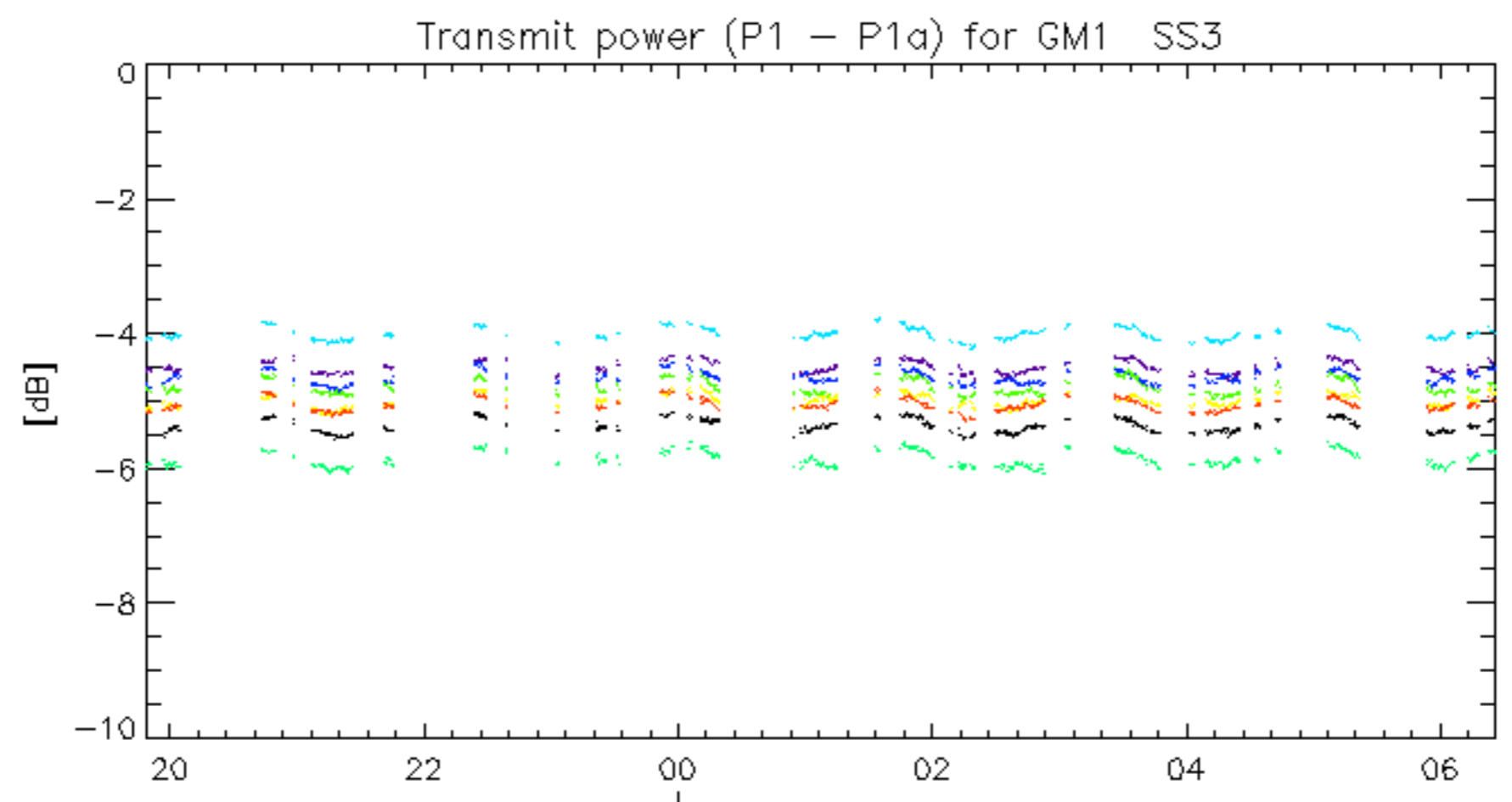




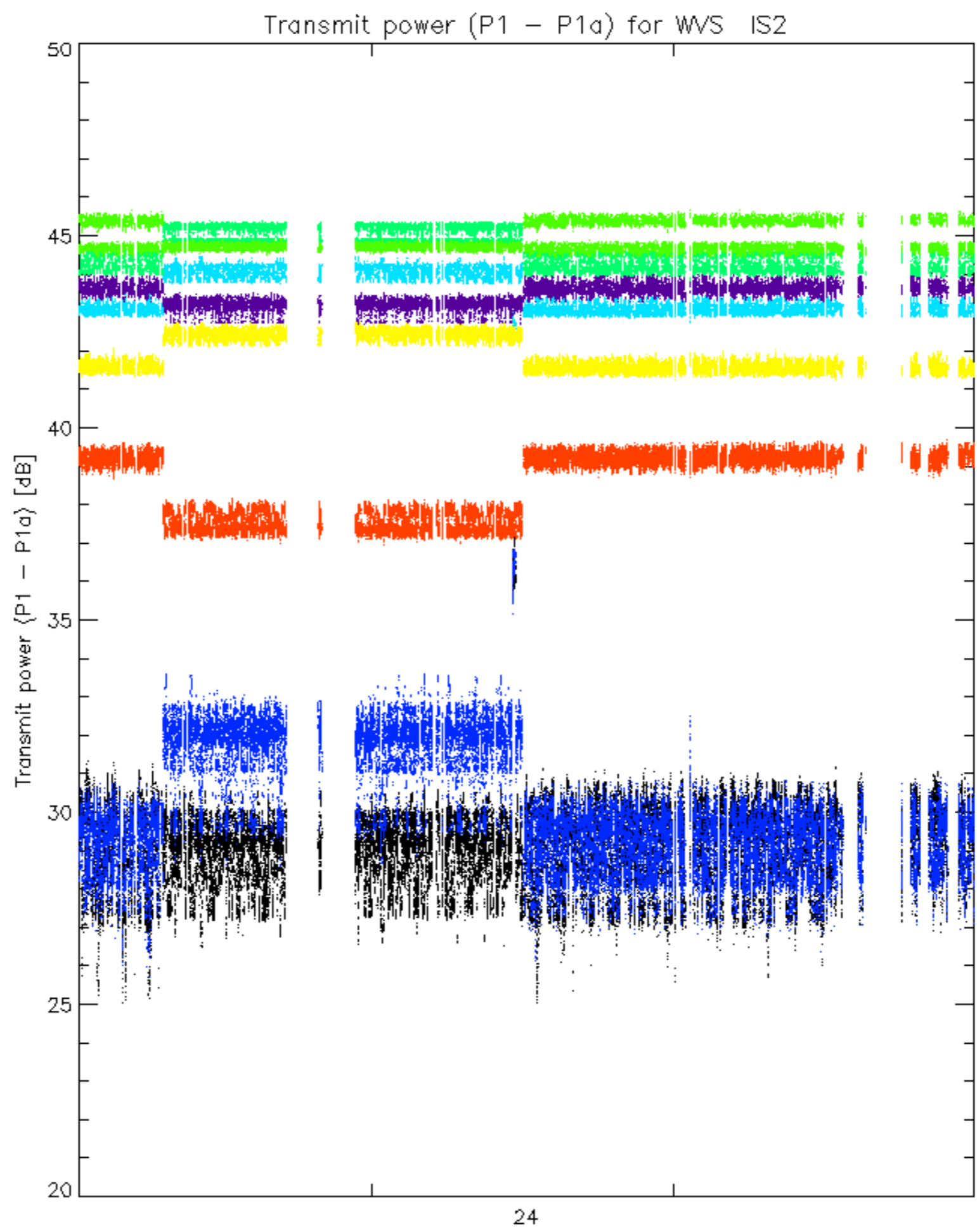
Transmit power (P1 - P1a) for GM1 SS3



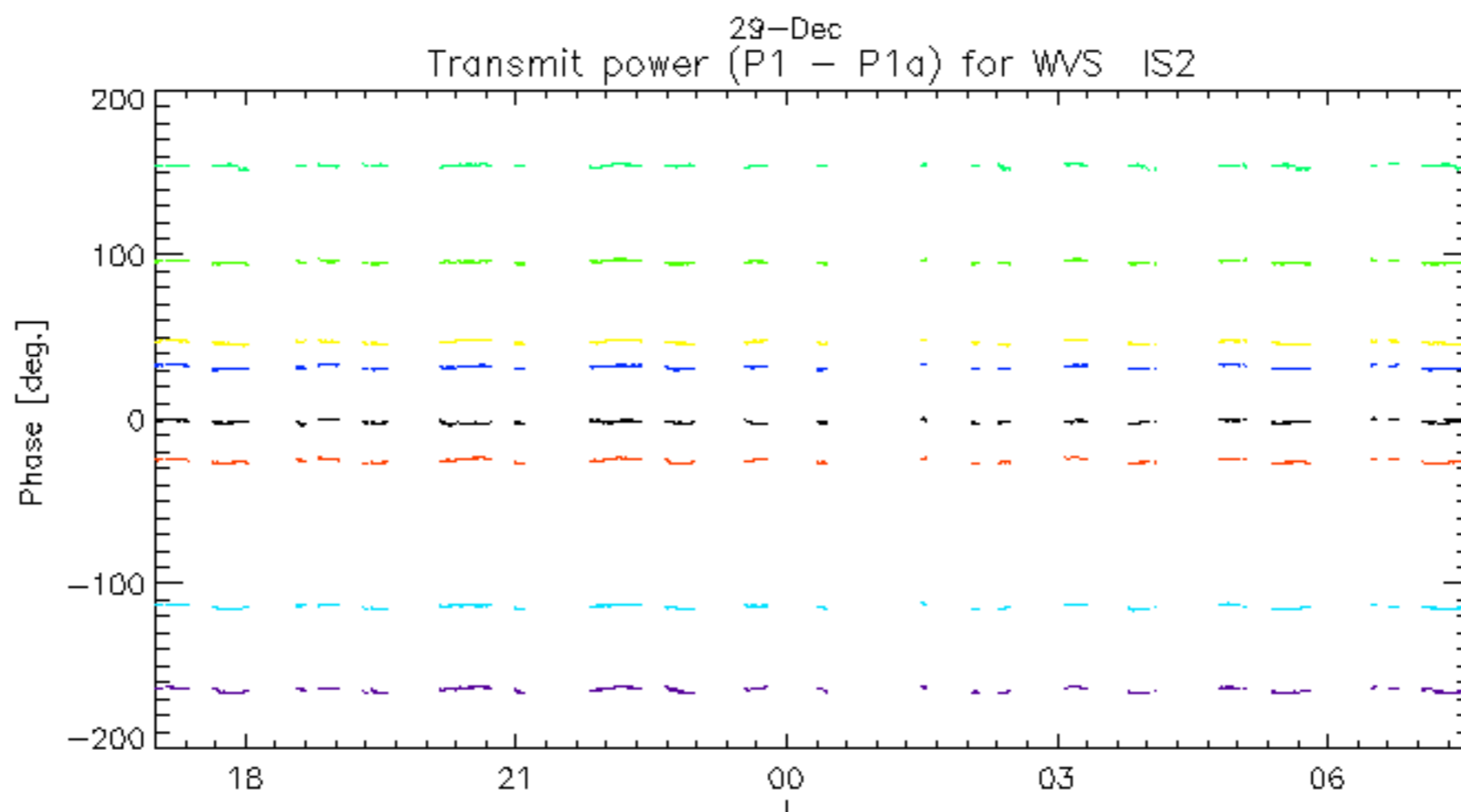
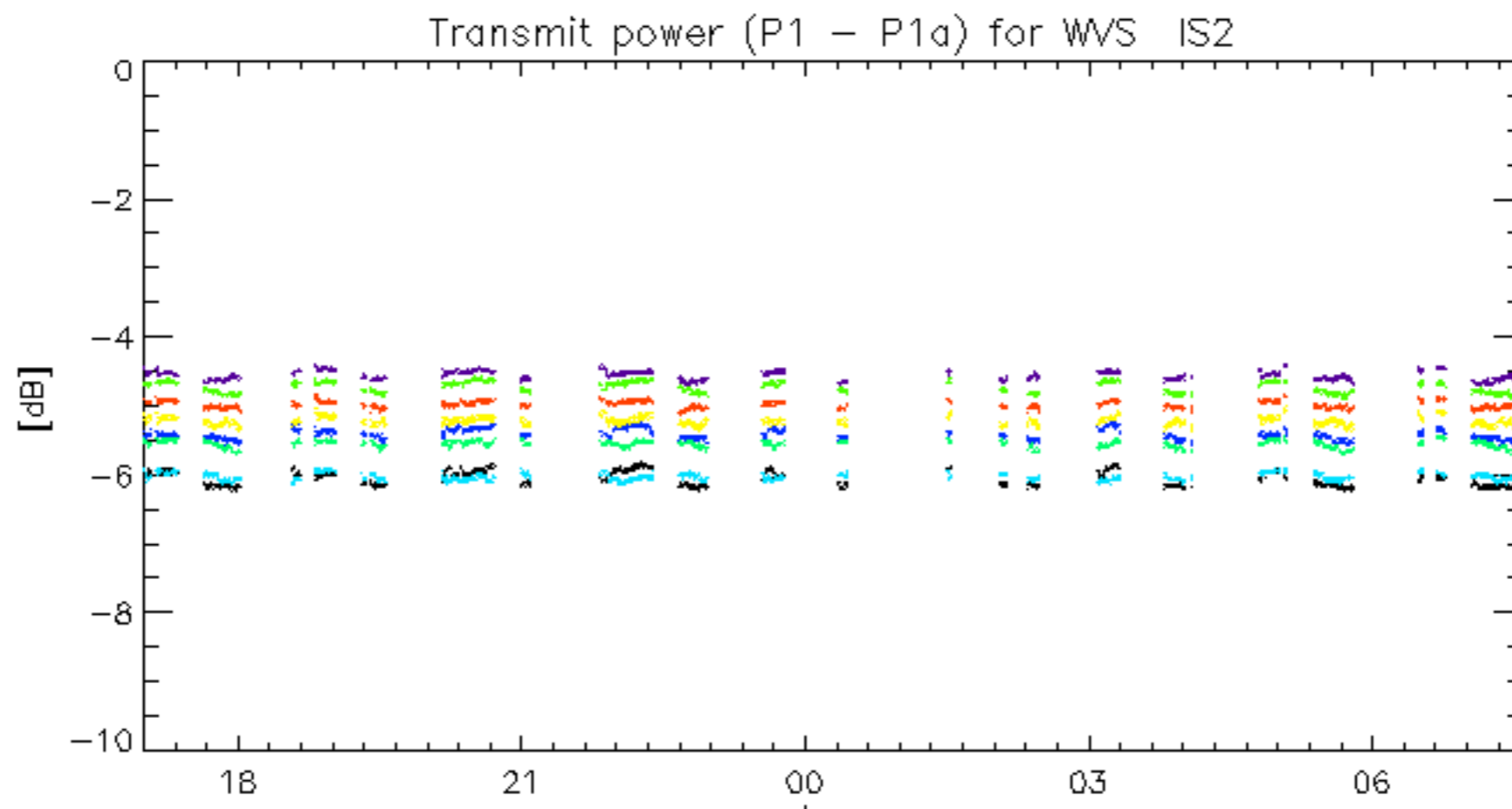
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



rows: **3** **7** **11** **15** **19** **22** **26** **30**



rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No unavailabilities during the reported period.